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Vol. 125, No. 6 August 7, 1948

RAILWAY AGE

With which are incorporated the Railway Review, the Railway Gazette, and the Railway-Age Gazette. Name Registered in U. S. Patent Office.

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Published each Saturday by the Simmons-Boardman Publishing Corporation, Orange, Conn., with Editorial and Executive Offices at 30 Church Street, New York 7, N. Y., and 105 W. Adams Street, Chicago 3, Ill.

Washington 4, D. C.: 1081 National Press Building—Cleveland 13: Terminal Tower—Seattle 1: 1033 Henry Building—San Francisco 4: 300 Montgomery Street, Rooms 805-806—Los Angeles 14: 530 West 6th Street—Dallas 4: 2909 Maple Avenue.

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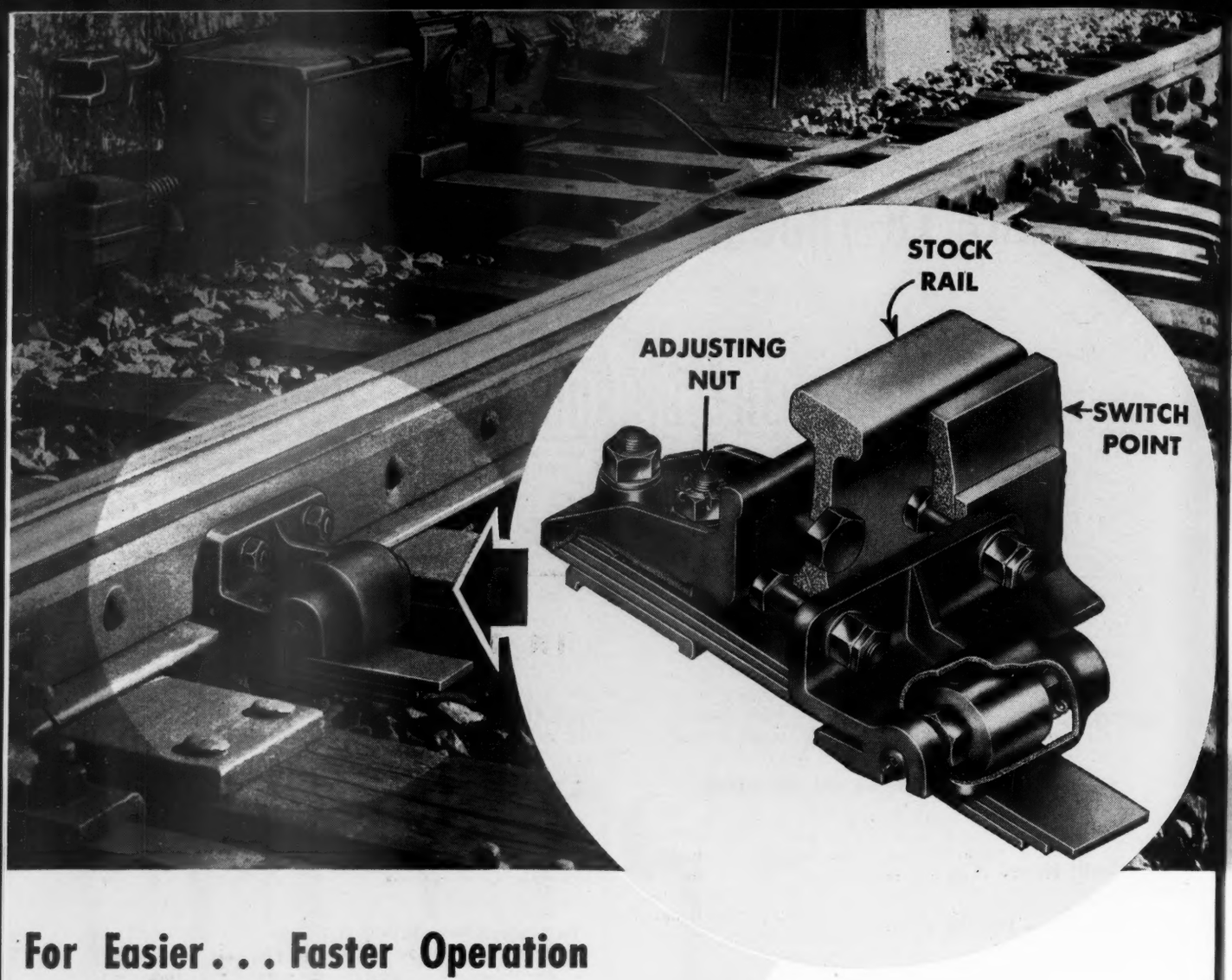
Subscriptions including 52 regular weekly issues, and special daily editions published from time to time in New York or in places other than New York, payable in advance and postage free. United States, U. S. possessions and Canada: 1 year, $6.00; 2 years, $10.00; other countries not including daily editions: in Western Hemisphere 1 year $10.00; 2 years $16.00; other countries 1 year $15.00, 2 years $25.00. Single copies, 50 cents each, except special issues.

H. E. McCandless, Circulation Manager, 30 Church Street, New York 7.

Railway Age is a member of Associated Business Papers (A. B. P.) and Audit Bureau of Circulation (A. B. C.) and is indexed by the Industrial Arts Index and by the Engineering Index Service.

PRINTED IN U.S.A.



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WEEK AT A GLANCE

MAKING MORE MONEY: Net income of the Class I railroads in June was $94 million, our news columns disclose, which is more than double the net of June, 1947. The six months' result was better than last year's, too. In part these encouraging figures reflect rate increases, but the cut in Crosser Law taxes gave the favorable trend a big boost.

C.T.C. SAVES LOCOMOTIVE-MILES: Among the operating advantages of the centralized traffic control installation of the Gulf, Mobile & Ohio on 58.5 miles of main-line single track in southern Illinois, not the least important is the reduction in helper engine use which it has helped materially to bring about. The illustrated article on page 22 explains how this has been accomplished.

TIE-BUYING DATA: Our annual analysis of the railroads' tie renewals appears herein (page 28). As compared to 194', there was a slight drop (0.76 per cent) in the number of ties installed last year, and 1946 was decidedly less active in this respect than 1945. The tendency continues to use treated ties very largely, however, and only one tie in twenty installed in 1947 was untreated.

BASING-POINT BAN UNDER STUDY: So-called heavy industries, both producers and consumers, are busy trying to find their way out of the fog created by the Supreme Court decision upholding, in general, the Federal Trade Commission's ukase against basing-point pricing practices. The railroads' future can be seriously affected by the decisions they reach. Meanwhile Congress is undertaking to look into the potentialities of this upsetting administrative policy, and in this survey it has enlisted the counsel of an advisory group under the direction of M. T. Copeland of the Harvard School of Business Administration. The Senate investigating committee's program is outlined in our news pages.

PORTENT: One effect of the Cement case decision the railroads can be sure of—namely, pleas for lower freight rates for points placed at a competitive disadvantage by the basing-point ban. Already Pittsburgh steel mills are asking for a concession, as our news pages report, and there is plenty of talk of using trucks to get around, or at least extend, territorial limitations ascribed to railroad freight charges.

PRO-DIESEL FIGURES: The full economic benefit of a shift from steam to Diesel-electric locomotives cannot be realized, one of our contributors declares (page 35), until all the steam power is out of service. But if a complete substitution with Diesels were accomplished, in all road-haul and terminal operations of all Class I carriers, the annual saving in fuel costs alone (including its transportation), at recent prices, would be $582 million. At that rate, he calculates, the net capital investment required to Dieselize could be amortized in less than six years from the savings related to fuel. The important question of petroleum supply is disposed of with comparisons between Diesel requirements and the railroads' current consumption of fuel oil in steam locomotives. Our author estimates that complete Dieselization would require 19,300 locomotives, while 34,700 steam locomotives could be retired.

MAY BUYING TOOK $216 MILLION: Five-months' purchases figures for the Class I roads appear on page 33. Reflecting the disturbance of normal conditions brought about by the coal mine shut-downs early in the year, fuel buying in May hit an all-time high in dollar figures. Prices per ton, of course, have gone skyrocketing too. Other categories of purchases contribute to the total increase in outlay which, including equipment ordered, is in the neighborhood of $150 million more than in the first five months of 1947.

REQUISITE FOR VICTORY: American railroads have reason to be encouraged by their recent success in getting relatively favorable treatment by the Interstate Commerce Commission in their efforts to keep rate levels at least within shouting distance of advancing payrolls. And they made definite progress in Congress when the Bulwinkle bill finally was passed and the unemployment insurance levy finally was brought down to a more realistic rate. But these satisfactory developments do not mean that there is no more work to be done to establish our railroads in such political and economic security under private ownership—unlike practically all other railroads in the world—that there will be no danger of socialization. Our leading editorial draws upon a battle strategy analogy to emphasize the need for continuing concentration on this main objective, which is not likely to be won so easily, but which will depend on securing a general public understanding that the free enterprise system has proved to be workable while the socialistic system, still on trial, is failing everywhere to come up to the promises of its prophets. There is disturbing evidence that "planning" and socialization of transportation are not yet routed here.

EX PARTE 166 DECISION: The effect of the most recent commission order in the general freight rate case is summed up in one of our articles this week. No change is made in the basic rates instituted in April when the latest interim increase was authorized, but modifications of commodity maxima and special charges are calculated by I.C.C. statisticians to clear the way for over $67 million a year in additional revenues. How long the railroads can make a living with these rates, however, will depend, as members of the commission pointed out, on how long the carriers are able to escape more wage rate increases and how soon material costs stop going higher.

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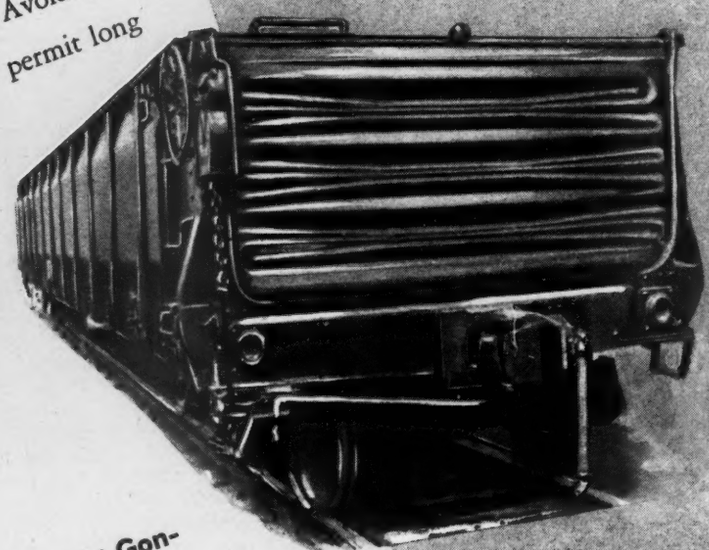

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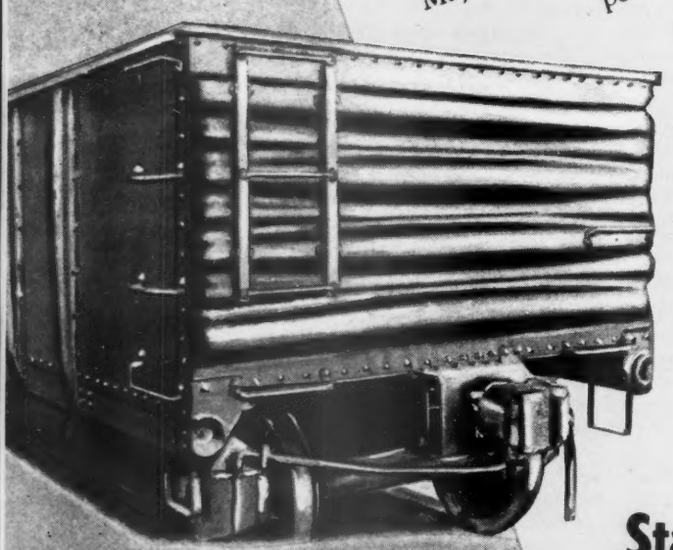

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TOO MUCH ATTENTION TO BATTLES AND NOT ENOUGH TO THE WAR

President Woodruff of the Erie said something worth retaining and repeating when he told the accounting officers at their recent session in Cleveland that America's system of free enterprise is not "on trial," as is so often asserted. Free enterprise already has been tried and has proved that it works. Instead, it is socialism that is on trial—practically everywhere in the world—and it isn't working anywhere, except in reverse. The trouble with free enterprise, Mr. Woodruff went on to explain, is not that it does not work, but that it is so feebly understood and so miserably sold.

"Planners" in the Saddle

Conclusive, and often ludicrous, evidence of the truth of Mr. Woodruff's observation about socialism is available from British experience in a recent book entitled "Ordeal by Planning," by an English economist named John Jewkes. The author reports the present look of the British "planned" economy in the words of an unnamed poet in the following words: "I see the harness and the reins all right, but where's the bloody horse?"

Socialism and government "planning"—just different words for the same thing—are long on restrictions and controls, and quite lacking in concern for the horsepower required to get things produced. Before jeering too loudly, though, at the fix our British brethren have got themselves into, let's look a little closer home, e.g., at domestic transportation. What we find is not cheerful—

Inland transportation plant consists largely of installations on the ground—the vehicles which roll, fly or float are only a minor fraction of the total machine, and the railroad part of this great plant is the only segment of it which remains in the hands of free enterprise. The fixed-plant part of all the rest of the transportation business in this country is operated under socialized ownership, socialized financing and socialized "planning"; and the ratio of the socialized part to the free-enterprise part is rising rapidly. The American people never made a conscious decision in favor of socialized transportation. Highways, waterways, and airports originated in socialized ownership—or drifted into it—because they had not, until recently, developed enough economic importance to attract private enterprise. When they suddenly acquired economic significance, the grasp of socialism upon them was too firm to be shaken off. They quickly acquired a bureaucracy and a lot of other vested interests with a large stake in perpetuating their continuance in socialism.

All the contradictory and wasteful characteristics of Britain's socialized economy so cogently signalized by Jewkes are duplicated in this coun-

try's "planning" of its superhighways, inland waterways and airports. Theses facilities are not called into being by the prospect of profits to be derived from supplying peoples' wants—instead, they originate in political agitation, and the costs are levied in large part on taxpayers who do not use them at all. "In a free economy," says, Jewkes, "prices must be linked to costs. . . . No one has yet devised a better system for coordinating the work of very large groups of people, for shifting the emphasis of production as demands change. . . . In the market the consumers, by their process of choosing, are engaged in a perpetual plebiscite as to the goods they want."

Piecemeal Acceptance of Socialism

In Chicago a couple of weeks ago there was a large convention of highway contractors, the evident purpose of which was to engender political enthusiasm for a vast outpouring of *public* funds—not these of willing private investors—on still further additions to the nation's vast highway plant. These expenditures are not to be gaged by the private enterprise criterion of the willingness of users to pay for them, but by the socialist criterion of how many votes such outlays can command in the federal and state legislatures. Is it any wonder that private investors are rather less than eager to put up the funds required for a thoroughgoing modernization of the railways' fixed plant, when they see so much competing socialized plant being built for which the users pay nothing, or next to nothing?

Jewkes observes that a "planned economy" is introduced either as a whole or piecemeal. If the latter—which is what is happening in transportation in the United States—then "no business man can foresee the future with certainty; he becomes less inclined to take risks, he refrains from embarking on capital expenditures which do not yield a quick return." In this country in the twenty years ended in 1940 capital expenditures of the railroads were 53 per cent for roadway and 47 per cent for equipment. For the six years 1941-46 capital outlays for fixed plant dwindled to 40 per cent of the total. In 1947 they fell to only 34 per cent. In 1948, in all probability, the ratio will sink to a new low. What Jewkes has observed in Britain of the effect on private enterprise when socialized facilities begin to compete with it is certainly being paralleled by American experience.

The railroads are engaged in a war for survival as private enterprise—and also in a lot of battles and skirmishes which are only small parts of the major struggle. Victory in the war depends upon the attainment of two objectives, viz.:

1. Settlement in recognized public policy upon a system of financing publicly owned transport plant which will prevent such plant from destroying the value of privately financed plant with which it competes.

2. General acceptance of the doctrine that regulatory and legislative restraints upon the industry must stop short of destruction. A parent has a right to discipline a child, but not to the extent of destroying his health or even his life.

The railroads have won some battles and skirmishes toward the second goal—but they have not even organized a definite campaign to attain the first. The passage of the Bulwinkle bill was a victory in the direction of reasonable as opposed to sadistic regulation. The improving response by the Interstate Commerce Commission to the need of the railways for increased rates to meet rising costs is also a victory—though as yet only a partial one—toward achievement of this second goal. A struggle as yet unwon in this part of the campaign is represented by the effort of the Justice Department to collect hundreds of millions of dollars in reparations from the railroads for alleged "overcharges"—when the industry over the past ten years has earned only 3.8 per cent on its investment, and when its stocks have at no time in the entire decade sold for more than about one-third the price of comparable industrial securities.

The recent book by Winston Churchill, reporting the initial stages of the recent war, provides many apt illustrations of how a superb strategist always subordinates his detailed military operations to his ultimate objective, which is not to win battles, but to win a war. The railroads would do well to adapt his method to their dealing with political problems. Until they do, it is highly improbable that they will firmly establish themselves beyond all danger of socialization.

AERIAL SURVEYS

The railroads seem to be overlooking an opportunity in their failure so far to make greater use than they have of aerial surveys. Aerial photography in no way replaces the engineer's transit and level for highly precise work—but, in actual experience, it has shown that it offers great speed, accuracy and economy for many kinds of investigations, planning, valuation and location.

According to a report of the American Public Works Association, aerial photography is saving cities millions of dollars and months of work. Cleveland officials, for example, assert that aerial mapping in their area is saving the taxpayers $2 million. Other cities, including Chicago, Atlanta, Ga., San Diego, Cal., and Muncie and Fort Wayne, Ind., have employed or are currently employing

aerial mapping, in some cases extensively, in connection with city planning, zoning, highway and park development, property recording and damage suits.

For such work, three general types of aerial surveys are used: (1) The airview, which is a picture taken with the camera pointed obliquely at the object; (2) the photomap, which is a single picture or series of pictures mosaiced together—exposed with the camera pointed straight down; and (3) the topographic map, which is a line map drawn in ink from aerial photographs by the use of photogrammetric methods. Each has its specific advantages and limitations, all the way from presenting a birdseye view of general conditions to an engineering map of high precision which can be made the basis of studies of many kinds.

Such surveys appear to have wide applicability on the railroads, e.g., preliminary to and as a part of actual construction work. Indeed, a number of roads already have used this relatively new form of engineering service for construction and relocation work, grade separation projects, terminal surveys, examination of high-water conditions and other types of investigations. In the maps resulting, every detail of the landscape—tracks, bridges, buildings, property lines, cuts, fills, water courses, etc.—is faithfully reproduced to accurate scale. Furthermore, by using stereopticon cameras and advanced techniques, it is asserted that height and depth variations of as little as two feet can be detected.

Such surveys should prove highly useful to the railroad engineer—not only in doing his actual work, but in helping him "sell" desirable projects to his management or to the public. Such visual presentation might often succeed in conveying an impression of what is proposed when a straight-line engineering drawing would fail. A roadmaster expounded the opinion recently that an aerial map of his territory, showing every inch of the alinement of his track, every railroad and highway grade crossing, every bridge, building and service facility, every waterway and every point of possible emergency, would be of great value to him in planning his work and keeping track of his forces.

Whether this proposal would be economically justifiable or not, there is no doubt about the applicability of aerial surveying to strictly engineering projects. Discussing this subject in the July issue of Railway Engineering & Maintenance, Leon T. Eliel, vice-president of Fairchild Aerial Surveys, Inc., suggests that *habit* is the chief reason why this new method has as yet made slow progress on the railroads. People naturally cling to proved methods with which they are familiar. Too much reliance on habit, however, may be a costly indulgence when it stands in the way of getting work done efficiently and economically.

DIESEL SHOP PLANNING

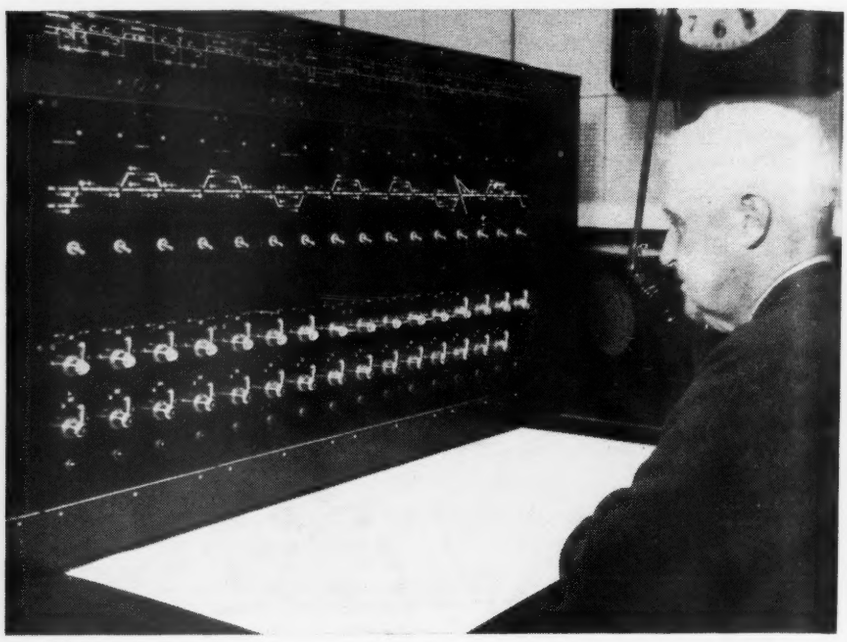
Several railroads have built Diesel maintenance and repair shops, or have converted existing shops, which have turned out to be entirely inadequate for the purpose for which they were intended. This situation is understandable because most railroads at the outset did not visualize the extent to which Diesel-electric motive power would supplant steam power and they did not anticipate the amount of repair work that these facilities would be called upon to handle. Enough experience with Diesel power has now accumulated to make it possible for a railroad to estimate with reasonable accuracy the ultimate Diesel horsepower that it can use economically. There has been and there still is, however, a lot of fog surrounding the maintenance and repair policy.

The Diesels have been thrown at the mechanical departments so rapidly that most of them did not have either the time or a sufficient knowledge of the problem to establish a definite policy with respect to Diesel maintenance and repair. The work has been handled almost on an emergency basis, using available services and facilities, most of them outside the railroad, for the supply of replacement and reconditioned parts. This situation has begun to change to some extent and the railroads are gradually taking on more of the repair and reconditioning work in their own shops as they have acquired more knowledge of the intricacies of Diesel engines and electrical equipment, and as the volume of repairs has increased. It is doubtful that the railroads can or will want to manufacture and overhaul many of the precision-built parts required to keep a Diesel locomotive in good running condition but they will take on all work that can be done advantageously in their own shops.

The trend toward the making of repairs in railroad shops was recognized by a Purchases and Stores Division committee of the A.A.R., reporting on Diesel locomotive parts at the recent Chicago meeting. After pointing out the increasing number of parts being repaired in railroad shops and the increasing number of railroads making repairs, the committee said, "Our investigation clearly indicates that it is to a railroad's advantage to consider the repairs of component parts on its own property. All studies that we have made indicate that there are worthwhile savings to be made in company repairs versus repairs outside of company shops."

The extent to which this trend develops will, of course, have a direct bearing on the magnitude and the kind of repair facilities needed for Diesel locomotives. This swing toward railroad-shop repairs must be gaged correctly if Diesel shops in the planning stage are to have the capacity to handle the work coming their way in the future.

The signals (left) are the searchlight type, this view being at the south end of the siding at King. The control machine (below) for the entire territory is located in the dispatcher's office at Murphysboro, Ill.



Gulf, Mobile & Ohio project on 58.5 mi. of single track has eliminated numerous train stops, reduced the number of sidings, aided in eliminating helper locomotives and saved train time

C.T.C. HELPS TRAINS OVER GRADES

Car Capacities of C.T.C.-Controlled Passing Tracks Between Murphysboro, Ill., and North Cairo

Location	Number of Cars
Etherton	98
Alto Pass	112
Mountain Glen	70
King	106
Mill Creek	95
Tamms	(yard)
Davis	98

As a means of reducing delays and generally increasing the efficiency and safety of train operation, the Gulf, Mobile & Ohio has installed centralized traffic control on 58.5 mi. of single track between Murphysboro, Ill., and North Cairo. This territory is a portion of the route between Chicago and Mobile, Ala., via St. Louis, Mo.—Murphysboro being 90 mi. south of St. Louis. On the operating division between East St. Louis and North Cairo, train movements were previously authorized by timetable and train orders, with no automatic block signaling. The cen-

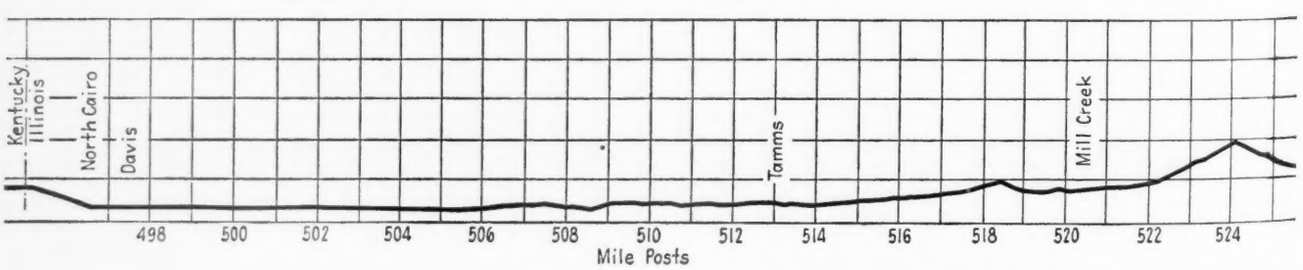


Fig. 2—Profile of the railroad in the centralized traffic control

tralized traffic control was installed as the first signaling project on this division because trains were encountering delays in this territory due to heavy grades.

Between Pomona and Alto Pass, 4.5 mi., the grade ascends southward, including about 2.5 mi. of 2 per cent and 1.75 mi. of 1.42 per cent. From Mountain Glen to Alto Pass, about 4 mi., the grade ascends northward, varying from 1.57 per cent to 2.12 per cent. Throughout these heavy grades between Pomona and Mountain Glen, the curves are numerous, and range from 4 to 6 deg., with one curve at 7 deg. 54 min. Between Mountain Glen and Mill Creek, 14 mi., the line goes up and down over three ridges with grades a mile or more long, ranging from 0.8 per cent to 1.4 per cent. Between Mill Creek and Tamms, 7 mi., the grade descends gradually to the south, and from Tamms to North Cairo, 16 mi., the grade is slightly rolling to level.

The schedules include two passenger trains and four manifest freight trains each way daily. A local freight train is operated each way daily except Sunday. Extra trains are operated as required, so that the number of trains daily may vary from 12 to 14 or more. Helper locomotives were previously required between Murphysboro and Alto Pass, as well as between Mountain Glen and Alto Pass, on all through freight trains operated by steam locomotives.

Fig. 1—Map of C.T.C. territory

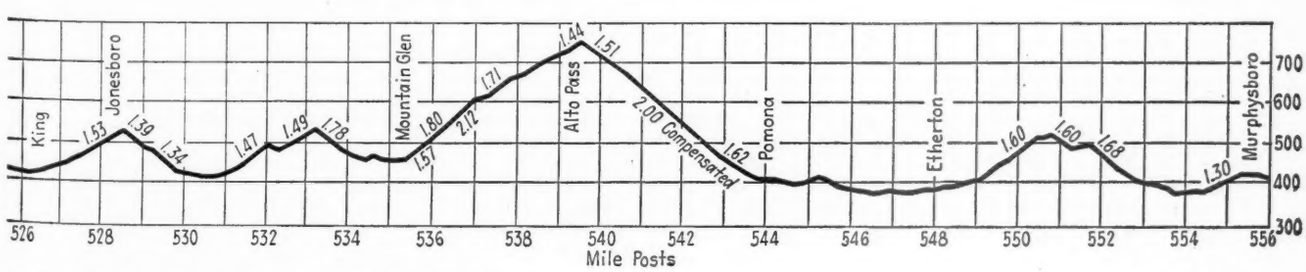
Longer and Fewer Sidings

As an important part of the improvement program, several changes and additions were made in the sidings. The previous sidings at Jonesboro and Weaver were removed, and a new siding was constructed at King. Other sidings were lengthened, the car capacities being given in an accompanying table. The sidings which were equipped with power switches and C.T.C. controlled signals, include Davis, Tamms, Mill Creek, King, Mountain Glen, Alto Pass and Etherton. Also at the south end of Murphysboro a power switch and C.T.C. signals were installed at the connection between the yard track and the main track.

Between Murphysboro and Tamms the distances between power-equipped sidings range from 5 mi. to about 6.5 mi. The block between sidings at Tamms and Davis is 14 mi. long. On account of the easy grades between these sidings, the trains can make better speed than on the hills farther north. For this reason no power switches or C.T.C. signals were installed at the siding at Hodges Park, which is between Davis and North Cairo. The switches at Hodges Park are equipped with electric locks, as are the other hand-throw switches. At the seven sidings which were equipped with power machines, new No. 20 turnouts and switches were installed so that long trains can depart at speeds up to 30 m.p.h.

Benefits to Train Operation

Under the former system of train operation—by timetable and train orders, with no automatic block signals—the train dispatcher for the division between East St. Louis and North Cairo was located in Murphysboro. Still located at this point, he now



territory between Murphysboro, Ill., and North Cairo

operates the C.T.C. control machine to control the power switches and signals for authorizing train movements by signal indication on the 58.5 mi. between Murphysboro and North Cairo, and he continues to issue train orders on the remainder of the division between Murphysboro and East St. Louis.

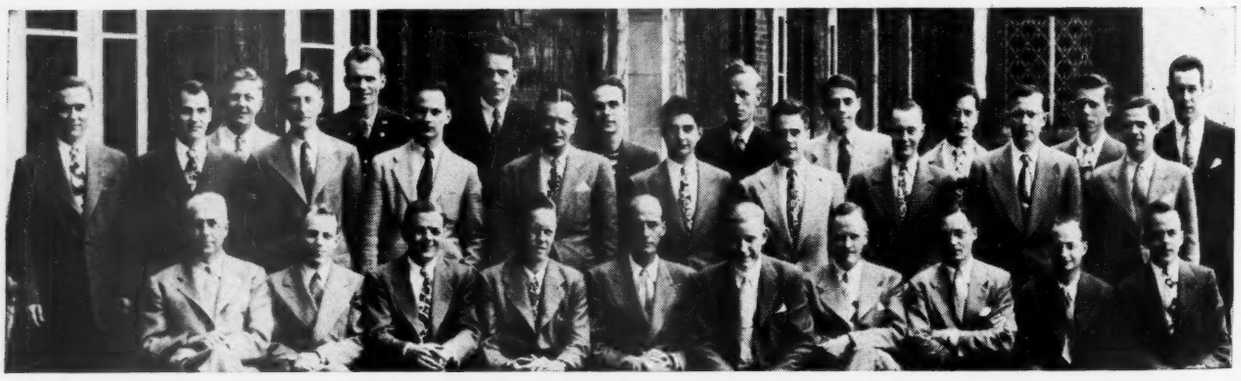
Previously the section of heavy grades and curves between Mill Creek and Pomona was a bottleneck of the entire division. Train speeds were low on account of the grades and curves. In numerous instances the trains lost considerable time when entering and leaving the sidings because of the delays and stops required when operating the hand-throw switches. Under timetable operation, the trains, in numerous instances, took siding and waited for long periods needlessly, although time and vacant track were available for them to be advanced, because with this method of train operation the dispatcher had no means of knowing exactly where the trains were, and he could not change train orders quickly to take advantage of changing conditions.

With the centralized traffic control, on the other hand, the illuminated track diagram on the dispatcher's machine indicates the location and progress of each train. Accordingly, he can control the power switches and signals to authorize trains to move to the best advantage. For example, he can favor trains on ascending grades to keep them moving all the way up and over the crest. In the meantime, when it is necessary for a train to take siding, he can plan the move so that the minimum number of stops and the minimum time are required. Taking advantage of the long sidings, many of the meets can be made without either train being required to stop. The dispatcher endeavors to plan meets so that, if a train is required to stop on a siding, it will be where it can be started easily.

By allowing the trains to keep going without stops on ascending grades, the need for helper locomotives on trains handled by steam locomotives has been eliminated. The elimination of the helpers was further materially expedited by the introduction of Diesel-electric locomotives on two of the manifest through freights each direction daily. The use of the C.T.C., however, is just as important with respect to the success of operating the Diesel-electrics because the tonnage handled in these trains depends, in part, on the opportunity to make a smooth nonstop run when approaching and climbing the heavy grades in both directions between Pomona and Mountain Glen. Thus the C.T.C is an essential part of the successful operation with both types of locomotives.

No heavy grades or curves are present in the 16 mi. between Tamms and North Cairo, but the inclusion of this section in the C.T.C. is highly important. North Cairo is the south end of the operating division, at which point the train and engine crews change. Accordingly, with the C.T.C. in service all the way between North Cairo and Murphysboro, the train movements can be authorized by signal indication on this entire 58.5 mi., without delays which would be incurred if train orders were still required on a short section.

This centralized traffic control project was planned and installed by signal forces of the Gulf, Mobile & Ohio under the direction of H. C. Sampson, superintendent signals—the principal items of signaling equipment being furnished by the General Railway Signal Company.



CONCLUDED FIRST RAIL INSTITUTE AT UNIVERSITY OF MINNESOTA

Among those in attendance at the First Midwestern Institute in Rail Transportation, held in April at the University of Minnesota, Minneapolis, Minn., were these railroad men and transportation students: (Left to right, front row seated) Fred W. Johnson, executive general agent, Gulf, Mobile & Ohio, Jackson, Miss.; William P. Westphal, attorney, Great Northern, St. Paul, Minn.; Holger A. Anderson, assistant to vice-president, Duluth, Missabe & Iron Range, Duluth, Minn.; A. Elmon Balentine, chief clerk to counsel, Boston & Albany, Boston, Mass.; Frank J. Lott, executive assistant, G. M. & O., Mobile, Ala.; Dr. Edmund A. Nightingale, associate professor of economics and transportation, School of Business Administration, University of Minnesota, and director of the institute; Charles F. Kenniger, trainmaster, D. M. & I. R., Duluth; Glenn E. Morgan, manager of personnel, Chicago & Eastern Illinois, Chicago; Willard V. Anderson, field editor, Trains, Kalmbach Publishing Company, Milwaukee, Wis.; and Clayton M. Anderson, student. (Second row) Emil S. Novak, chief rate clerk, general traffic department, Minneapolis. The remaining men in the second row are undergraduates at the university, excepting fifth from left, William A. Kelch, general agent, passenger department, C. & E. I., Minneapolis. (Third row) All are under-graduates excepting second from left, Lt. Col. Myron M. Christy, Transportation Corps., U. S. Army, Minneapolis

EX PARTE 166 RATE INCREASES MADE PERMANENT

No changes in general rate basis from April's interim increase, but adjustments in commodity and special charges may net the railroads about $68 million more annually

The railroads this week were preparing to make effective as soon as possible the permanent increases in freight rates approved by the Interstate Commerce Commission in its final decision in Ex Parte 166. The increases — basing traffic computations for a "constructive normal year" as about 1 per cent below the actual volume in 1947 — are estimated by the commission to produce additional annual revenues of $65,200,000, plus $2,200,000 as the result of a further increase of 5 per cent authorized to be charged by the carriers for protective services against heat and cold.

The commission's decision supersedes three previous interim increases authorized in the proceeding, the last of which, amounting to an overall increase of about 4 per cent, came in April, as reported in *Railway Age* of April 24, page 42. The latter increase raised the railroads' freight rates by approximately 21.4 per cent over the rates in effect last October, at which time the first Ex Parte 166 interim increase averaging 8.9 per cent was granted. The commission now estimates the total increase in net freight revenue over the amount yielded by the rates in effect at the time of the initial interim increase to be about $1,535,000,000, or 22.6 per cent; in other words, 1.2 per cent more than rates approved in the third interim adjustment, but still approximately 7.4 per cent less than the overall 30 per cent increase sought by the railroads.

No Dissenters

The commission's report on further consideration in the case was made public on July 29 and authorizes the railroads, as well as water carriers and freight forwarders, to publish the necessary tariffs on 15 days' notice. With the exception of Commissioner Rogers, who was "necessarily absent," all members of the commission, including Colonel J. Monroe Johnson, who also is director of the Office of Defense Transportation, participated in the consideration and disposition of the case. The findings were unanimous, although Commissioners Miller, Patterson and Mitchell filed separate concurring opinions. The committee of cooperating state commissioners —Potter, of California; Mason, of Ohio; and Knight of Louisiana — also concurred with the findings of the federal agency.

Specifically, the commission authorized the railroads to increase their rates permanently over the October, 1947, level by (1) 30 per cent within Eastern territory; (2) 25 per cent within Southern territory, within zone I of Western Trunk-line territory and interterritorially between Southern and Western territories and between those territories on the one hand and Eastern territory on the other; (3) 20 per cent within Western territory, other than zone I of Western Trunk-line territory; and (4) 22½ per cent between Western territory generally and zone I of Western Trunk-line territory. With the exception of the latter, these increases are the same as those approved by the commission in its April interim report, wherein it authorized an increase of 25 per cent between Western territory generally and zone I of Western Trunk-line territory. All of the general percentage increases are subject to stated limitations as maxima.

Iron Ore Increase Stands

With respect to protective service charges, the commission authorized a 15 per cent increase over the October, 1947, level, or 5 per cent more than that approved in its April report. At the same time, the commission made permanent another phase of that same report — the 18 per cent increase in charges for handling iron ore at both upper and lower Great Lake ports.

In addition to authorizing joint rates between rail carriers and water or motor carriers to be increased to the same extent and in a like manner as authorized for all-rail rates, the commission found that where application of the authorized increases to base rates or charges results in fractional cents, such fractions shall be resolved to the nearest quarter cent if the base rate or charge is not more than 5 cents, to the nearest half cent if the base rate or charge is more than 5 cents but not more than 10 cents and to the nearest whole cent if the base rate or charge is more than 10 cents. As an exception to the foregoing, however, fractions resulting from the application of the authorized increases to basic line-haul commodity rates on grain, grain products and grain byproducts of more than 10 cents shall be resolved to the nearest half cent.

In a notice to the public, which accompanied the commission's findings, W. P. Bartel, secretary of the commission, observed that the commission "somewhat modifies" its last interim report by making both "increases and decreases." Of the newly authorized increases in freight rates and charges, he said, about $34 million will accrue to the Eastern district carriers, about $10 million to the Western district lines, $6 million to the Southern region railroads and $17 million to the Pocahontas region lines.

"As the increases allowed in October last were superimposed upon the increase allowed in the earlier decisions in similar application by the carriers, effec-

tive July 1, 1946, further increased January 1, 1947, the total increases in freight revenues of the Class I railroads from June 30, 1946, to and including the increases now authorized, are estimated by members of the commission's staff as about $2,550,000,000, or approximately 44 per cent," Mr. Bartel's notice said. "These figures relate to freight alone and do not include increases in other operating revenue of the carriers from increases allowed in passenger, mail, compensation for transporting express, and other operating revenues, which for Class I railroads aggregate about $365 millions a year. . . . The commission's staff points out that these estimates are based on the assumption that the states will follow the same general pattern," in approving higher intrastate rates.

The additional annual revenue of $65,200,000 which the commission sees accruing to the railroads is expected to result from the new maximum rates which have been approved for various commodities, principally coal and coke, iron and steel and other mine products. In this connection, the commission's findings provide for an average increase of about 10 cents per ton for coal, with a new maximum rate of 40 cents per ton.

The commission also limited the increases in rates on coal from Illinois mines to East St. Louis, Ill., and Alton, when for movement beyond by barge to points on the Mississippi river, Winona, Minn., and north, to 16 cents per net ton — the present maximum is 12 cents — and 20 cents per net ton from western Kentucky mines, from which origin there previously had been no maximum. It also prescribed that the increase in coal rates to the North Atlantic ports, Hampton Roads, Va., and north, when for movement beyond by water in coastwise service, and in the rates from New England ports to the interior on coal reaching such ports by water, shall not exceed 20 cents per net ton, as compared with the present increase of 30 cents per net ton.

As for other commodities, the commission has raised from 14 cents per 100 lb. to 16 cents the maximum increase on aluminum, railway car axles, copper, brass, bronze articles, iron and steel, scrap iron and steel, lead, zinc, nails, spikes, pig iron, rails and railway track material, tin or terne plate scrap, trucks, iron and steel wire and tanks and tank material. Commodities on which maximum permissible increases were reduced include cement, from 6 cents per 100 lb. to 4 cents; brick and tile, from 6 cents to 3 cents; clay, from 6 cents to 1½ cents, when moved in open cars; conduit, clay or shale, from 6 cents to 3 cents; citrus fruits, from 22 cents to 20 cents; lime, from 10 cents to 6 cents; phosphate rock and phosphatic sand and clay from 6 cents to 5 cents; wood pulp from 20 cents to 14 cents; and sugar from 20 cents to 12 cents.

The commission also has established maximum increases on other commodities, including 22 cents per 100 lb. on edible nuts; 1½ cents on pyrites cinder; 8 cents on animal glue; 30 cents on wool and mohair; and 6 cents on roofing chips, gypsum, soapstone or talc, when moved in closed cars, and 1½ cents when hauled in open cars. Barytes, feldspar, fluorspar, aplite rock and kyanite ore were given a new 6 cents per 100 lb. maximum increase, while clay, concrete or earthen drain tile or sewer pipe and fittings now have a maximum rate of 3 cents per 100 lb. Among other new maximums fixed are roofing, siding or sheathing, 16 cents per 100 lb.; paper scrap, rags and cotton waste, 11 cents; unmixed grain syrup, 12 cents; cotton linter pulp, 14 cents; wood excelsior, 14 cents; and salt cake (sodium sulphate), 6 cents per 100 lb.

That the commission may be asked in the near future to consider another freight increase request from the railroads was indicated in the concurring expressions of Commissioners Miller, Patterson and Mitchell. The former said he concurred in the results of the commission's report insofar as "some increases" are allowed, but added that the report "falls short" of meeting the financial needs of the carriers. "Even if the earnings estimated for a 'constructive normal year' are realized, the percentage returns on the rate bases found in the report obviously will be too low in the Eastern district and the Southern region as compared with that for the Western district," Commissioner Miller said.

Commissioner Patterson said he was in "general agreement" with the views expressed by Commissioner Miller.

"I am further of the opinion," he added, "that in view of increases in railroad wages . . . and in the cost of materials and supplies, which have recently occurred but which are not given consideration in the report, and others which are imminent, this proceeding should be held open so that appropriate action in the light of these further increases may be taken promptly."

"The Public Must Pay"

Commissioner Mitchell observed that it was "evident" to him that the railroads will have to have an additional increase in revenues if there are further increases in wages and other expenses. "The railroads have little control over expenses, particularly wages," he added. "They have no power to fix rates and thus have little control over their revenues. They are in competition with government subsidized waterways, and in recent years with the expanding activities of the air and motor lines. Rate increases have to come from the pockets of the public, yet the railroads must have sufficient revenue to meet increased costs."

The commission, meanwhile, held that it would be "speculative" on its part to attempt to evaluate the effect of further increases in prices of materials and labor that to a certain extent may be imminent. "On the other hand," it said, "there are some indications that in certain respects our estimate of future traffic may be too conservative, but here again, it would be unduly speculative for us upon the basis of present information to attempt to balance possible traffic increases upon one class of commodities, as agricultural products, against possible losses in other commodities due to the immediate or remote consequences of industrial disturbances due to labor disputes, shortages of material, etc. If conditions change sufficiently to require modification of our conclusion with respect to the general revenue features of the case, the way is always open for those injuriously affected, whether carriers or their patrons, to bring the matter to our attention."

The commission said that the issues presented by the petitioners were "necessarily complex." The pro-

ceeding, it added, is, in effect, one such as was contemplated by the Hoch-Smith Resolution, and is essentially like the situation presented at the close of federal control in World War I both with respect to the amounts of the increase sought, ratably and in the aggregate, as well as by reason of the grounds urged for relief.

The commission also commented that Ex Parte 166 differed from other general rate cases in many respects. "While it is based upon necessities growing out of increases in wages and materials costs, and changes in the consist and volume of traffic (notably passenger traffic), the economic situations that formed the ground for the initial petition have continued and changed, and have increased in severity while the case was on hearing," the commission said.

The railroads filed three petitions in the case. Their original petition of July 3, 1947, was amended on July 23, while two supplemental petitions, each calling for higher increases than previously sought, were filed September 5, 1947, and December 3, 1947. The latest application, in which the overall average increase of 30 per cent was sought, was based on further increased costs for wages and changes in operating rules affecting wages, effective November 1, 1947, amounting to $96,350,000 yearly, including payroll taxes, and on the pending wage dispute involving the three hold-out operating unions. It was estimated by the carriers at the time that a settlement with those three brotherhoods would raise the Class I railroads' operating costs by another $68,350,000 yearly.

Traffic Estimated

The commission, in the course of its 99-page mimeographed report, said it regarded the railroads' estimate that their 1948 freight traffic would amount to 630,173,700,000 ton-miles as "somewhat too low" to serve as a reliable guide. "A reasonably close basis seems to us to be the 647,358,500,000 ton-miles, which was estimated in part and in part calculated by the railroad petitioners for 1947, although their estimate was about 7.3 billion ton-miles, or slightly over 1 per cent, below the actual performance for that year," it continued. "We accept for the normal, constructive year, 647,358,500,000 ton-miles upon the basis of this record".

The commission found that the index of future industrial production used by the secretary of agriculture has "elements" of uncertainty that make it an unsafe guide for the estimation of the normal course of freight traffic, save in a rough way. The department, using various industrial production indices, had estimated that freight traffic in 1948 would fall within the range of 700 billion to 770 billion ton-miles. The commission also said that could not accept the estimate of the National Association Railroad & Utilities Commissioners that there would be a 5 per cent increase in passenger-miles in 1948, as compared with 1947.

The commission observed that the "going" average freight revenue per ton-mile, approximately 1.279 cents as of May 6, is the highest shown for Class I roads since the creation of the commission in 1887 and is apparently higher than at any time since 1873. That figure was approached, it went on, only in the year 1921, when the average receipts per ton-mile amounted to 1.275 cents. The railroads' December petition, it added, sought rates which would yield an average revenue per ton-mile of 1.380 cents.

According to the commission, the increases already permitted under Ex Parte 166, as applied to the traffic of the "constructive normal year," would yield freight revenues of $8,281,100,000. "In addition to increases in their revenues authorized in this proceeding and in Ex Parte 162 . . . petitioners have realized substantial increases in their passenger fares and charges, both interstate and generally on intrastate traffic, in their pay for transporting the mails, and in revenues from express privileges, all within the last two years," the report added. "Other proceedings are pending before us and before certain of the state regulating authorities in which the petitioners are seeking further increases."

By November 1, 1947, the commission's report continued, the average index prices for materials and supplies other than coal and oil had increased 55.7 per cent over the pre-Pearl Harbor basis; coal and oil had increased 96.3 per cent; and all materials and supplies 68.3 per cent. "While the increases in the prices of materials and supplies other than fuel have been significant, the increases in wages and fuel prices have been somewhat more sharp, and have had a greater effect in increasing the operating expenses of the petitioners," the commission said. "Thus for the 10 years, 1936-1945, inclusive, the annual expenditures of the Class I roads for materials and miscellaneous have been at the average rate of almost exactly one-third of the total expenditures for labor (salaries and wages) and fuel (steam locomotives) for the same year, while for the year 1946 the expenditures for the former were but 29.06 per cent of the total outlay for labor and fuel.

"This reflects both increases in wages and in the cost of fuel and a simultaneous reduction in the use of other materials and supplies. The financial situation of the carriers, and the difficulty in securing desired and needed materials for repairs and replacements, were factors in disturbing this correlation. The decrease from 1945 in the amount expended in 1946 for other materials and supplies, approximately $152 million, or 10 per cent of the amount for 1945, coupled with the sharp reduction in the ratio of such expenditures in 1946 to the expenditures for wages and fuel, indicates maintenance and repairs were subnormal, and indicates also that maintenance of the physical plant was being deferred appreciably."

"The position of the water carrier brings into focus a basic issue which is in need of clarification," the commission commented. "These carriers rightfully intervened in this proceeding and seek such protection as the law may afford in any possible revision of the railroad rate structure. The effect of railroad rates on the ability of water lines, as well as other transportation agencies, to compete with the rail carriers in furnishing adequate and efficient service is one of the factors to be considered under the amended Interstate Commerce Act, interpreted in the light of national transportation policy. But interests of competing carriers are not the only considerations we must take into account under the statute. Since the creation of this commission, Congress, the courts and the com-

mission itself have recognized that, in the exercise of the regulatory function, we must have due regard for the welfare of the entire nation and all of its various component interests that may be affected by transportation."

The commission went on to say that, in determining the issues presented by the water lines, it must weigh their interests along with those of all others who may be affected by the results of the proceeding. "These various interests, experience has shown, do not always coincide but sometimes conflict," the commission added. "Manifestly, a just conclusion in such circumstances may require that some interests yield sufficiently to permit due recognition of the rights of others concerned with the results."

"Water transportation always has had some influence on rail rate structures," the commission said. "In recent decades, its lower costs have forced many downward adjustment of rail rates, particularly in transcontinental and certain coastwise rates. In other cases, joint rail-water rates of large interterritorial scope have been evolved. Recent large increases in water carrier costs, coupled with the difficulties experienced by some branches of the industry in restoring services interrupted by the war, have caused reversal of the competitive positions of water and rail carriers. This reversal is, of course, the basis of the problems we now face in adjusting rail and water rates with due regard for the rights of both rail and water carriers and for our responsibilities to the public. The questions presented are complex in a high degree."

TIE RENEWALS DOWN SLIGHTLY IN 1947

Replacements reported by Class I roads in United States and Canada continued at low levels, although some lines showed substantial increases

The conditions that were responsible for a slump in 1946 of 14.4 per cent in the number of tie renewals by the Class I roads in the United States and Canada, compared with the previous year, continued to prevail in some degree during 1947, as indicated by the fact that this measure of activity in the industry showed a further slight increase of 0.76 per cent below 1946. While 60 class I roads in the United States installed more ties per mile of maintained track in 1947 then they did in 1946, 62 roads in this country and three in Canada installed fewer ties last year. Two roads installed the same number of ties as in the previous year.

These activities resulted in the Class I roads in

Installing a new treated crosstie. Tie renewals per mile of track for the country as a whole were practically the same in 1947 as in the previous year

the United States inserting 35,299,803 new wood treated ties, 1,798,210 new wood untreated ties, 191,103 second-hand ties and 556 ties other than wood, making a grand total of 37,289,672 ties of all classes installed in 1947. This total is 272,711 less than for 1946, a decrease of 0.76 per cent, and is lower than in any year for which figures are available, including even the low point of the depression, reached in 1933, when a total of 37,295,716 ties were inserted. Last year three roads in Canada inserted 7,056,896 new wood ties, a decrease of 360,407, or 5.2 per cent, as compared with 1946.

Since the amount of new rail laid in 1947 was substantially higher than that laid in 1946, the decrease

Statistics of Crosstie Renewals on Leading Railroads in the United States and Canada for the Calendar Year Ending December 31, 1947

Road	Miles of maintained track occupied by crossties	Total number of new wood crossties laid in replacement in 1947	Number of wood crosstie renewals per mile of maintained track		Per cent of wood crossties renewals to all ties in track		Average cost of new wood ties treated†	Estimated total crossties in all maintained tracks	Cost of New wood cross-tie renewals per mile of maintained track	Cost of new Wood crosstie renewals per thousand equated gross ton-miles (cents)
			1947	5-year average	1947	5-year average				
New England Region:										
Bang. & Aroos.	829.04	135,410	163	139	5.7	4.9	$2.96	2,382,831	$365	14 36
B. & M.	2,884,88	179,833	62	58	2.1	1,9	2.96	8,510,400	185	3.13
C. N. R. (lines in N. E.)	237.61	25,736	108	103	3.4	3.3	1.99	751,871	208	8.04
C. P. R. (lines in Me.)	216.07	21,572	100	79	3.2	2.6	2.17	671,715	214	2.16
C. P. R. (lines in Vt.)	125.08	8,524	68	87	2.3	2.9	2.15	377,644	145	2.50
Central Vt.	495.02	25,695	52	33	1.8	1.1	2.43	1,463,000	126	2.66
Me. Cent.	1,210.23	149,385	123	115	4.1	3.8	3.15	3,619,900	324	8.27
N. Y. Connecting	25.90	3.242	125	115	4.0	3.7	3.45	81,641	431	3.01
N. Y. N. H. & H.	3,809.61	315,566	83	83	2.6	2.6	2.72	11,919,330	225	3.14
Rutland	486.13	18,891	39	44	1.2	1.4	2.49	1,511,300	97	2.75
Total	10,319.57	883,854	86	80	2.8	2.6	2.80	31,289,632	225	3.93
Great Lakes Region:										
Ann Arbor	402.78	40,364	100	97	3.3	3.2	2.75	1,221,484	275	5.94
Camb. & Ind.	56.43	4,610	82	181	2.8	6.4	2.88	162,501	235	8.74
D. & H.	1,355.40	166,727	123	126	3.9	4.0	3.00	4,244,880	368	3.26
D. L. & W.	2,181.86	188,567	86	76	3.0	2.6	2.78	6,327,854	241	2.84
Det. & Mack.	275.78	36,099	131	105	4.4	3.5	2.22	826,009	249	21.93
D. & T. Shore Line	149.26	10,084	68	66	2.2	2.1	3.08	450,321	208	3.82
Erie	4,709.09	290,364	62	72	2.1	2.4	2.85	13,885,890	176	1.91
G. T. W.	1,850.02	214,100	116	138	3.6	4.4	2.34	5,867,717	271	4.51
L. & H. R.	111.72	11,009	99	110	3.7	4.1	3.40	300,300	328	3.97
L. & N. E.	245.14	18,477	75	59	2.5	2.0	3.16	742,836	238	5.46
L. V.	2,590.18	241,310	93	88	3.1	3.0	3.07	7,726,409	286	4.36
Monongahela	238.41	18,223	76	108	2.6	3.7	2.88	694,714	220	3.43
Montour	72.88	6,346	87	83	3.0	2.9	3.58	209,895	285	6.19
N. Y. C.	20,964.62	1,533,086	73	114	2.4	3.7	2.81	64,588,333	206	2.22
N. Y. C. & St. L.	2,539.96	341,696	135	150	4.3	4.8	2.85	8,000,874	384	3.61
N. Y. O. & W.	703.31	...	..	3	..	0.1	...	1,995,516	...	...
N. Y. S. & W.	212.73	8,670	41	41	1.4	1.4	2.67	617,804	109	6.27
P. & L. E.	824.13	81,809	99	99	3.3	3.3	2.60	2,490,364	258	3.82
P. & S.	116.57	17,887	153	176	5.4	6.2	3.10	329,471	476	13.60
P. & W. Va.	180.93	14,509	80	118	2.6	3.9	3.24	550,571	260	3.53
Wabash	3,166.09	315,430	100	112	3.2	3.6	2.70	9,858,302	269	3.20
Total	42,957.91	3,559,373	83	106	2.7	3.3	2.81	131,734,118	232	2.70
Central Eastern Region:										
A. C. & Y.	214.89	39,080	182	223	6.3	7.7	1.93	620,342	411	9.46
B. & O.	10,346.64	1,036,970	100	152	3.5	5.3	2.54	29,505,868	255	2.60
B. & L. E.	485.83	13,773	28	37	0.9	1.2	3.41	1,511,785	97	0.94
C. of N. J.	930.49	76,507	82	96	2.9	3.4	2.57	2,615,670	212	3.39
C. of Pa.	470.13	53,009	113	*	4.0	*	3.04	1,321,709	343	4.40
C. & E. I.	1,325.24	80,068	60	113	2.0	3.6	2.39	4,031,716	145	2.43
C. & I. M.	170.14	19,340	114	157	3.9	5.3	3.14	496,967	357	4.04
C. I. & L.	731.88	90,928	124	74	4.0	2.4	2.41	2,272,032	299	5.77
D. T. & I.	601.85	43,040	72	56	2.5	1.9	2.55	1,733,328	178	4.91
E. J. & E.	850.30	52,257	61	96	2.0	3.1	2.38	2,630,617	146	2.99
Ill. Term.	633.85	46,411	73	82	2.4	2.7	2.18	1,901,550	159	7.41
Long Island	791.88	91,525	116	136	4.1	4.8	3.47	2,255,146	401	6.74
Mo.-Ill.	215.36	47,255	219	203	7.0	6.5	2.26	675,281	496	22.84
Penna.	21,422.24	1,905,974	89	98	3.1	3.4	2.87	61,139,853	256	2.31
P.-R. Seashore Lines	634.21	68,356	108	87	4.0	3.2	3.51	1,723,334	379	12.45
Reading	2,848.23	364,925	128	122	4.6	4.3	2.73	7,919,351	350	4.49
S. I. R. T.	92.43	6,978	75	76	2.9	2.9	2.72	236,624	206	9.90
W. M.	1,161.08	89,814	77	87	2.7	3.0	2.76	3,368,172	213	2.29
W. & L. E.	843.38	84,325	100	100	3.3	3.3	2.52	2,533,202	252	3.60
Total	44,770.05	4,210,535	94	112	3.3	3.9	2.75	128,492,547	258	2.74
Pocahontas Region:										
C. & O.	7,772.26	684,676	88	106	2.9	3.5	2.64	23,621,218	233	1.85
N. & W.	4,297.16	488,740	114	81	3.7	2.6	2.40	13,321,196	273	2.17
R. F. & P.	408.00	21,178	52	168	1.8	5.9	2.54	1,191,400	132	0.81
Va.	926.39	92,488	100	96	3.2	3.1	2.05	2,847,544	205	1.65
Total	13,403.81	1,287,082	96	99	3.1	3.2	2.51	40,981,358	241	1.89
Southern Region:										
A. G. S.	548.13	120,135	219	178	7.2	5.9	2.77	1,658,590	608	6.95
A. & St. A. Bay	106.41	10,913	103	**	3.4	**	2.95	323,689	303	7.47

Footnote references appear on page 30.

Road	Miles of maintained track occupied by crossties	Total number of new wood crossties laid in replacement in 1947	Number of wood crosstie renewals per mile of maintained track		Per cent of wood crosstie renewals to all ties in track		Average cost of new wood ties treated†	Estimated total crossties in all maintained tracks	Cost of new wood crosstie renewals per mile of maintained track	Cost of New Wood crosstie renewals per thousand equated gross ton-miles (cents)
			1947	5-year average	1947	5-year average				
Southern Region (continued)										
A. & W. P.	141.22	18,711	132	205	4.3	6.6	2.59	436,508	340	5.11
A. C. L. (Inc. A.B.C.)	7,393.35	1,876,108	254	233	8.4	7.9	2.52	22,446,621	617	11.17
C. of G.	2,390.47	356,419	149	148	5.3	5.1	2.05	6,698,700	305	7.04
C. & W. C.	426.91	79,961	187	204	6.5	7.1	2.30	1,233,527	430	16.05
C. N. O. & T. P.	769.06	73,495	96	73	3.3	2.5	2.77	2,246,918	265	2.04
Clinchfield	414.70	87,813	212	168	7.0	5.5	2.66	1,260,690	433	3.58
Col. & Green	205.44	37,140	181	171	5.4	5.4	2.29	692,018	414	28.21
F. E. C.	1,148.03	224,083	195	173	6.7	6.0	2.74	3,344,383	503	7.72
Ga.	437.33	49,192	112	184	3.7	6.0	2.52	1,338,976	275	5.42
G. & F.	460.35	92,561	201	250	7.5	9.3	...	1,241,838	307	21.41
G. S. & F.	464.73	97,359	209	160	6.7	5.1	2.83	1,462,677	393	9.17
G. M. & O. (Incl. Alton)	3,540.53	829,054	234	236	7.5	7.6	2.43	10,990,418	559	10.20
I. C. (Incl. G. & S. I. & Y&MV)	9,851.78	1,947,147	198	210	6.5	6.9	2.39	30,038,435	471	6.84
L. & N.	6,718.46	901,149	134	143	4.7	5.0	2.49	19,236,929	334	4.07
Miss. Cent.	173.25	27,951	161	135	5.1	4.3	2.63	550,873	424	25.96
N. C. & St. L.	1,447.36	123,440	85	165	3.1	6.0	2.13	3,967,214	182	2.85
N. O. & N. E.	289.83	67,933	234	215	8.2	7.4	3.03	830,073	710	6.82
Nor. Sou.	844.96	193,146	229	260	7.8	8.8	2.57	2,470,215	471	20.55
S. A. L.	5,345.38	915,009	171	186	5.7	6.2	2.44	16,150,786	417	6.03
Southern	8,612.02	1,109,106	129	143	4.2	4.6	2.95	26,633,634	379	5.44
Tenn. Cent.	342.00	51,915	152	158	5.0	5.2	2.53	1,035,576	298	9.80
W. of Ala.	184.83	22,985	124	207	4.1	6.8	2.60	562,900	321	5.51
Total	52,256.53	9,312,725	178	185	5.9	6.2	2.51	156,852,188	437	6.68
Northwestern Region:										
C. & N. W.	11,181.75	1,184,228	106	113	3.6	3.8	2.27	33,160,975	238	5.37
C. G. W.	1,872.53	250,552	134	143	4.5	4.8	2.70	5,553,011	329	5.69
C. M. St. P. & P.	13,542.45	1,969,419	145	143	4.7	4.6	2.27	41,902,764	323	6.56
C. St. P. M. & O.	2,147.43	249,156	116	123	3.9	4.2	2.43	6,367,237	281	7.17
D. M. & I. R.	1,098.65	61,986	56	80	1.9	2.7	2.21	3,272,880	120	1.80
D. S. S. & A.	514.88	70,922	138	144	4.7	4.8	2.27	1,518,268	293	10.52
D. W. & P.	207.00	54,503	263	321	9.0	10.9	2.10	607,993	523	11.53
G. N.	10,236.82	1,265,282	124	139	4.0	4.5	2.20	31,541,085	269	4.88
G. B. & W.	274.24	30,249	110	216	3.6	7.3	2.71	843,763	240	9.64
L. S. & I.	238.78	35,575	149	136	5.0	4.6	2.69	716,340	271	29.48
M. & St. L.	1,564.21	235,479	151	132	5.0	4.4	2.49	4,723,985	338	12.39
M. St. P. & S. S. M. (Incl. Wis. C.)	4,810.54	535,453	111	95	3.7	3.2	2.14	14,397,757	234	6.94
N. P.	9,266.38	607,756	66	89	2.3	3.1	1.99	26,896,203	131	2.69
Spok. Int.	177.30	54,670	308	353	10.6	12.2	...	515,147	456	22.94
S. P. & S.	1,130.07	191,369	169	248	5.6	8.1	2.57	3,442,968	430	7.33
Total	58,263.03	6,796,599	117	126	3.9	4.2	2.25	175,460,376	257	5.44
Central Western Region:										
A. T. & S. F.	19,230.74	1,699,430	88	85	2.9	2.8	1.94	58,403,757	172	2.12
C. B. & Q.	11,854.49	886,012	75	147	2.4	4.8	2.16	36,606,665	161	2.71
C. R. I. & P.	9,522.59	683,918	72	121	2.4	4.0	2.21	28,446,365	159	2.69
C. & S.	827.04	77,364	94	102	3.1	3.4	2.25	2,481,120	210	4.33
C. & W.	106.05	2,990	28	51	1.0	1.8	2.81	308,200	79	28.72
D. & R. G. W. (Incl. D. & S. L.)	3,451.79	136,235	39	37	1.3	1.2	2.64	10,772,600	104	1.94
F. W. & D. C.	1,032.43	126,956	123	121	4.1	4.0	2.28	3,073,031	280	6.77
Northwestern Pac.	420.40	48,293	115	204	4.0	7.1	2.86	1,218,839	305	9.13
S. P.-Pac. Lines	11,804.36	1,107,343	94	119	3.0	3.8	2.55	36,730,345	237	2.22
T. P. & W.	277.96	8,371	30	***	1.0	***	1.91	877,631	58	3.88
U. P.	13,168.62	986,663	75	122	2.7	4.3	2.03	37,181,346	152	1.48
Utah	71.39	11,543	162	87	5.8	3.1	2.77	200,394	396	5.52
W. P.	1,531.50	532,755	348	238	11.6	8.0	3.10	4,582,745	777	9.30
Total	73,299.36	6,307,873	86	115	2.9	3.8	2.19	220,883,038	187	2.34
Southwestern Region:										
B. S. L. & W.	148.34	23,860	161	189	5.4	6.4	2.28	441,700	367	2.96
B.-R. I.	178.27	30,114	169	112	5.4	3.6	2.30	557,985	388	6.87
I.-G. N.	1,420.97	196,122	138	123	4.6	4.1	2.16	4,258,600	298	4.81
K. C. S.	1,276.58	89,997	70	174	2.2	5.5	2.19	4,041,290	154	1.91
K. & O. G.	350.11	24,904	71	54	2.4	1.8	2.33	1,036,325	166	3.82
L. & A.	875.39	113,484	130	290	4.0	8.9	2.09	2,848,336	272	6.25
M. V.	355.93	22,855	64	58	2.2	2.0	2.26	1,053,550	145	12.45
M.-K. T.	3,902.13	425,370	109	201	3.5	6.4	2.36	12,276,900	258	4.88
M. P.	8,914.80	1,416,477	159	112	5.1	3.6	2.34	27,509,555	371	5.00
N. O. T. & M.	227.62	32,209	142	172	4.6	5.6	2.26	696,300	320	4.73
O. C.-A.-A.	136.99	26,006	190	223	6.6	7.8	2.12	394,530	401	50.49
St. L. B. & M.	763.63	111,935	147	158	4.8	5.2	2.25	2,310,000	329	5.70
St. L.-S. F.	6,229.33	801,030	129	122	4.1	3.9	2.15	19,617,689	270	5.13
St. L. S. F. & T.	148.39	17,428	117	99	3.8	3.2	2.12	464,729	247	4.43
St. L. S. W.	1,873.05	344,919	184	182	5.9	5.8	2.30	5,807,698	423	5.25
S. A. U. & G.	355.15	43,887	124	134	4.3	4.7	2.30	1,024,300	285	13.63
T. & N. O.	5,442.58	611,717	112	117	4.0	4.2	2.09	15,309,754	235	3.98
T. & P.	2,271.27	390,721	172	208	5.9	7.1	2.14	6,639,850	367	3.93
Tex. Mex.	210.16	16,937	81	102	2.5	3.2	2.23	665,787	174	13.77
Total	35,080.69	4,739,972	135	144	4.4	4.7	2.24	106,954,878	301	4.72
Grand Total, U. S. *a*	330,350.95	37,098,013	112	127	3.7	4.2	2.44	992,648,135	270	3 64
Canadian Roads:										
C. N. R.	26,899.00	3,859,827	143	158	4.9	5.4	1.91	78,859,271	247	b
C. P. R.	21,111.00	3,083,824	146	146	5.1	5.1	2.04	60,818,599	267	5.63
Ont. Nor.	693.60	113,245	163	189	5.7	6.5	2.25	1,970,550	223	1.02

†These are storekeepers' average costs for the ties charged out and used. They are not actual costs or the price paid for ties purchased during the period.

*The Central Railroad of Pennsylvania commenced operations in August, 1946; formerly part of the Central Railroad of New Jersey.

**The Atlanta & St. Andrews Bay became a Class I road January 1, 1947; formerly a Class II road.

***The Toledo, Peoria & Western made no report for 1945 and 1946.

a Totals for the Great Lakes region and for the United States include figures for the Pittsburgh, Shawmut & Northern for three months ending March 31, 1947, on which date this road discontinued operations.

b Not reported.

in crosstie renewals presents something of an enigma. One explanation may be in the fact that some roads are in the trough of the tie-renewal cycle. Another factor is that the cost of a new tie in track has risen to the point where there has been some curtailment of renewals to keep within budget allotments. Also, labor shortages continued to prevail in some areas in 1947, and in such localities some reduction in tie allotments may have been necessary to give priority to the installation of new rail with the force available, at the expense of programmed work of other types.

The comparisons given above are drawn from the tabulation of statistics of tie renewals compiled for the Committee on Ties of the American Railway Engineering Association by the Bureau of Railway Economics of the Association of American Railroads, and are based on reports made to the Interstate Commerce Commission by the roads in the United States, and made directly to the bureau by the Canadian roads. These statistics are reproduced here in condensed form.

The figures for 1947 are based on reports from 128 roads, including one — the Atlanta & St. Andrews Bay — which reported for the first time, it having become a Class I road on January 1, 1947. Dropped from the list are the Alton, which merged with the Gulf, Mobile & Ohio in June, 1947; the Denver & Salt Lake, which became part of the Denver & Rio Grande Western in April, 1947; the Pere Marquette, which merged with the Chesapeake & Ohio in June, 1947; and the Missouri & Arkansas and the Pittsburg, Shawmut & Northern, both of which have ceased operations. Of the roads reporting 125 are in the United States and 3 are in Canada.

Outstanding Individual Records

The relatively slight decline in the total number of ties installed in 1947 was reflected in a decrease in that year of one tie (113 to 112) in the average number of new wood ties inserted per mile of maintained track. On the other hand some roads made tie installations at substantially increased rates over 1946. Among these were the Western Pacific, from 123 to 348; the Louisiana & Arkansas, from 25 to 130; the New York Connecting, from 39 to 125; the Chicago & Illinois Midland, from 34 to 114; the Utah, from 85 to 162; and the Mississippi Central, from 98 to 161.

Roads on which substantial decreases in tie renewals per mile of track were reported included the Akron, Canton & Youngstown, from 269 to 182; the Chicago & Eastern Illinois, from 142 to 60; the Atlanta & West Point, from 214 to 132; the Western of Alabama, from 183 to 124; the Oklahoma City-Ada-Atoka, from 248 to 190; the Georgia & Florida, from 253 to 201; and the Chicago, Burlington & Quincy, from 126 to 75. The two roads that inserted the same number of new ties per mile as in 1946 were the Erie (62) and the Lehigh & Hudson River (99).

From a regional standpoint, the tabulation shows that insertions of new wood ties per mile of track increased in the New England region (85 to 86), the Pocahontas region (96 to 99), the Northwestern region (104 to 117), and the Southwestern region (115 to 135). Decreases occurred in the Great Lakes region (97 to 83), the Central Eastern region (102 to 94), the Southern region (187 to 178), and the Central region (90 to 86).

For the five years ended with 1947 the averages of the number of new ties inserted per mile of track in the several regions were: New England, 80; Great Lakes, 106; Central Eastern, 112; Pocahontas, 99; Southern, 185; Northwestern, 126; Central Western, 115; and Southwestern, 144. The five-year average for the entire United States was 127.

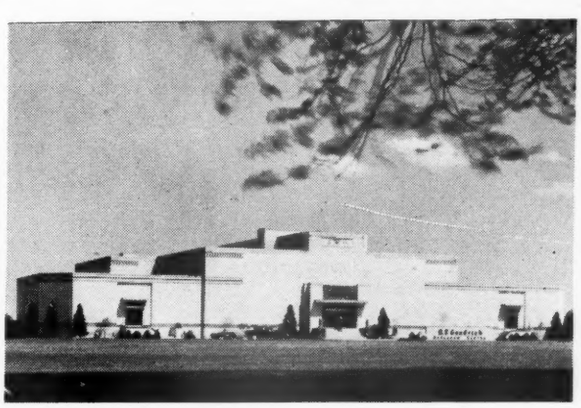
Treated Ties Hold Their Own

During 1947, 49 roads used treated ties exclusively in making renewals, as compared with 63 companies that reported using such ties exclusively in 1946, and 66 in 1945. However, only three roads used no treated ties, and on the great majority of roads reporting the insertion of untreated ties, the numbers used were relatively unimportant. While a total of 1,798,210 new untreated ties was installed by the reporting roads of the United States, only seven roads reported using an excess of untreated ties over treated ties.

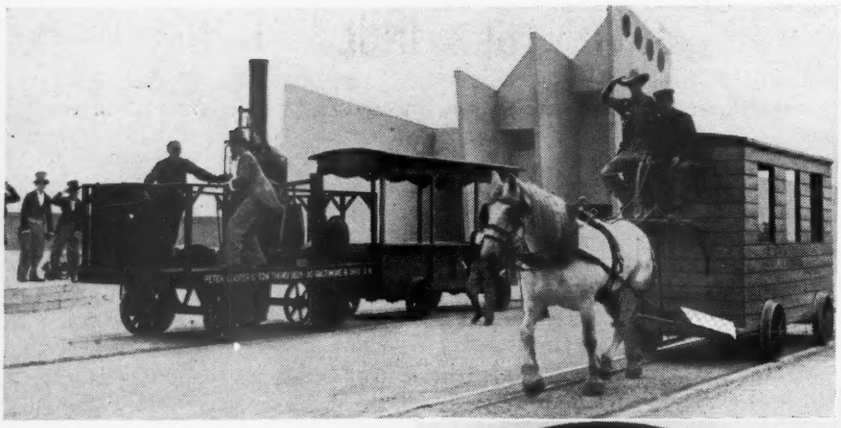
A total of 35,299,803 new treated wood ties were used by the reporting roads in the United States last year, a decrease of 129,376 ties, or 0.36 per cent, below the 35,429,179 ties reported for 1946. However, the ratio of new treated wood ties to all ties increased from 94.3 per cent in 1946 to 94.7 per cent in 1947. This figure compares with 94.0 per cent in 1945, 93.4 per cent in 1944, 91 per cent in 1943, and 89 per cent in 1942. The number of untreated ties used in 1947 decreased 2.3 per cent, and the number of second-hand and substitute ties declined 34.4 per cent to 191,659.

The last two columns of the accompanying table give two measures of tie renewal policies with respect to cost. One of these columns gives the cost of renewals per mile of maintained track, while the other gives the cost of the renewals per thousand equated gross ton-miles. Caution should be exercised, however, in comparing these figures because of the wide variations in conditions between different sections of the country.

The data in this table cover a total of 330,350.95 mi. of maintained track in the United States, compared with 330,630.31 mi. in 1946, a decrease of 279.46 mi.

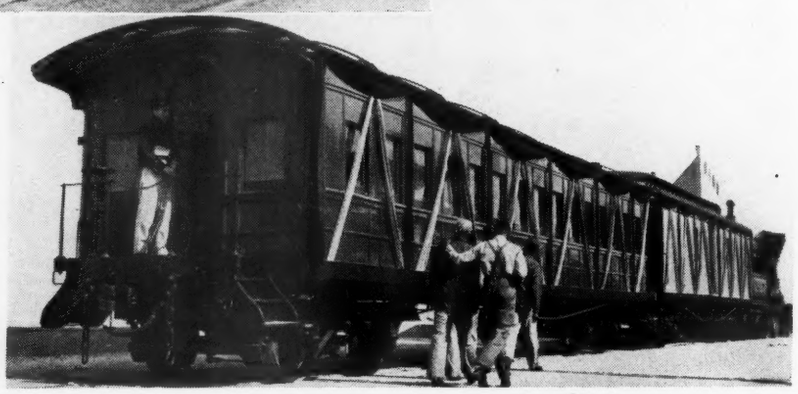


Main laboratory building of B. F. Goodrich Company's research center at Brecksville, Ohio



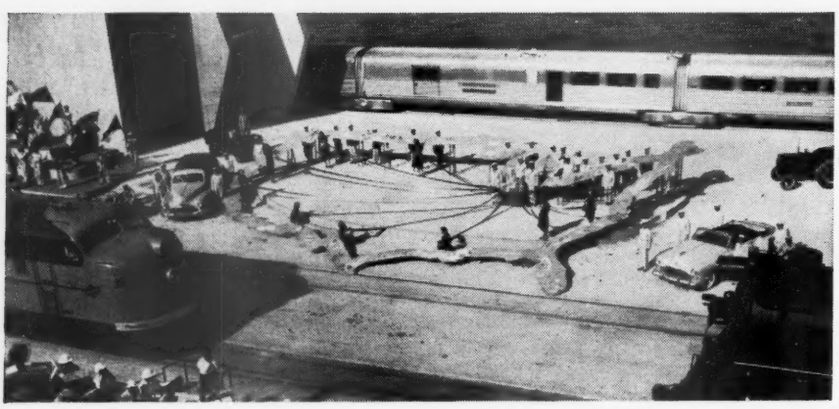
The old gray mare beats the "Tom Thumb" on the Baltimore & Ohio at the Railroad Fair in Chicago

SCENES FROM "WHEELS A-ROLLING"



The passage of Lincoln's funeral train lends a somber note to the pageant

The driving of the golden spike on the first transcontinental is performed with original locomotives under steam



The final scene presents the "Pioneer Zephyr," modern locomotive power and a "live" map of strategic railroads

RAILROAD BUYING CONTINUES AT HIGH RATE

Purchases of rail and ties climb from last month; fuel buying is largest in railroads' history

1948 RAILWAY PURCHASES*

	May (000)	Five Month Totals 1948 (000)	Five Month Totals 1947 (000)
Equipment**	$32,775	$341,746	$270,742
Rail	6,747	35,812	35,701
Crossties	6,038	26,930	38,780
Other Material	96,395	478,607	448,704
Total from Manufacturers	$141,955	$883,095	$793,927
Fuel	73,940	338,513	273,596
Grand Total	$215,895	$1,221,608	$1,067,523

*Subject to revision
**Amount placed on order

Expenditures for equipment, supplies and fuel by the Class I railroads of the United States in the first five months of 1948 reached $1,221,000,000, indicating that the total for the year probably will be around the $3 billion mark, possibly even above it. This rate is 14 per cent above that for the comparable period last year, with all items in the *Railway Age* breakdown, except crossties, showing gains from the five month 1947 showing. However, crosstie buying during May, 1948, showed a rise of 9 per cent from April, perhaps indicating that an upswing is coming in the purchase of this item. Expenditures for fuel in May set a new high; this was a result of the mine shut-down in the spring and of the higher coal prices resulting from the settlement of that strike.

Diesel-electric locomotives continued to be a big factor in railroad equipment orders. During the month of May the estimated total of orders for this type of motive power reached $24,000,000 for 125 locomotives and 19 miscellaneous units. Freight car orders for May numbered 1,791, at an estimated cost of $7,175,000. Thirty-six passenger-train cars fill out the rest of May's equipment orders. Their cost will approximate $1,600,000.

Inventories continued to rise in April, despite the fact that only scrap and miscellaneous material showed any increase from March, and that fuel on hand as of May 1 was down 7 per cent from the January 1 figure. The effects of the March-April coal strike of course are reflected in the May 1 fuel inventory total.

MAY* PURCHASES OF MANUFACTURED GOODS (Excl. Equip. & Fuel)

Year	May '48 Compared to Other Mays (000) Amt.	% Change
1942	$ 75,605	+44
1943	66,527	+64
1944	87,044	+25
1945	81,481	+34
1946	81,891	+33
1947	105,379	+ 4
1948	109,180	

Month	May '48 Compared to Other Months '47 and '48 (000) Amt.	% Change
Jan. '47	$ 97,962	+11
Apr. '47	110,847	— 2
Jan. '48	102,510	+ 7
Feb. '48	100,083	+ 9
Mar. '48	118,188	— 8
Apr. '48	111,388	— 2
May '48	109,180	

Year	Five Month Totals '48 and Other Years (000) Amt.	% Change
1942	$383,658	+41
1943	316,980	+71
1944	416,341	+30
1945	403,099	+34
1946	380,213	+42
1947	503,334	+ 8
1948	541,349	

MAY* PURCHASES OF RAIL

Year	May '48 Compared to Other Mays (000) Amt.	% Change
1942	$6,637	+ 2
1943	4,599	+47
1944	6,188	+ 9
1945	5,184	+30
1946	4,968	+36
1947	6,972	— 3
1948	6,747	

Month	May '48 Compared to Other Months '47 and '48 (000) Amt.	% Change
Jan. '47	$7,723	—13
Apr. '47	6,767	— 1
Jan. '48	7,252	— 7
Feb. '48	8,041	—16
Mar. '48	8,500	—21
Apr. '48	5,272	+28
May '48	6,747	

Year	Five Month Totals '48 and Other Years (000) Amt.	% Change
1942	$23,114	+55
1943	22,649	+58
1944	32,750	+ 9
1945	29,032	+23
1946	20,356	+76
1947	35,271	+ 2
1948	35,812	

MAY* PURCHASES OF CROSSTIES

Year	May '48 Compared to Other Mays (000) Amt.	% Change
1942	$6,156	— 2
1943	6,758	—11
1944	7,410	—19
1945	6,484	— 7
1946	7,915	—24
1947	8,441	—28
1948	6,038	

Month	May '48 Compared to Other Months '47 and '48 (000) Amt.	% Change
Jan. '47	$7,421	—19
Apr. '47	9,117	—34
Jan. '48	5,370	+12
Feb. '48	4,378	+38
Mar. '48	5,606	+ 8
Apr. '48	5,538	+ 9
May '48	6,038	

Year	Five Month Totals '48 and Other Years (000) Amt.	% Change
1942	$28,084	— 4
1943	28,431	— 5
1944	35,095	—23
1945	28,731	— 6
1946	35,566	—24
1947	40,107	—33
1948	26,930	

*Subject to revision

MAY* PURCHASES OF FUEL

May '48 Compared to Other Mays (000)			May '48 Compared to Other Months '47 and '48 (000)			Five Month Totals '48 and Other Years (000)		
Year	Amt.	% Change	Month	Amt.	% Change	Year	Amt.	% Change
1942	$34,701	+113	Jan. '47	$59,602	+24	1942	$168,798	+101
1943	44,991	+ 64	Apr. '47	52,465	+41	1943	224,082	+ 51
1944	51,039	+ 45	Jan. '48	72,296	+ 2	1944	256,353	+ 32
1945	48,638	+ 52	Feb. '48	69,010	+ 7	1945	233,952	+ 45
1946	30,280	+144	Mar. '48	67,757	+ 9	1946	214,151	+ 58
1947	52,469	+ 41	Apr. '47	55,510	+33	1947	278,726	+ 21
1948	73,940		May '48	73,940		1948	338,513	

MAY* PURCHASES OF OTHER MATERIAL

May '48 Compared to Other Mays (000)			May '48 Compared to Other Months '47 and '48 (000)			Five Month Totals '48 and Other Years (000)		
Year	Amt.	% Change	Month	Amt.	% Change	Year	Amt.	% Change
1942	$62,812	+53	Jan. '47	$82,818	+16	1942	$332,460	+44
1943	55,170	+75	Apr. '47	94,963	+ 2	1943	265,900	+80
1944	73,446	+31	Jan. '48	89,888	+ 7	1944	348,496	+37
1945	68,813	+38	Feb. '48	87,664	+10	1945	345,327	+39
1946	69,008	+40	Mar. '48	104,082	— 7	1946	324,291	+48
1947	89,966	+ 7	Apr. '48	100,578	— 4	1947	427,956	+12
1948	96,395		May '48	96,395		1948	478,607	

MAY* TOTAL PURCHASES (Excl. Equip.)

May '48 Compared to Other Mays (000)			May '48 Compared to Other Months '47 and '48 (000)			Five Month Totals '48 and Other Years (000)		
Year	Amt.	% Change	Month	Amt.	% Change	Year	Amt.	% Change
1942	$110,306	+66	Jan. '47	$157,564	+12	1942	$552,456	+59
1943	111,518	+64	Apr. '47	163,312	+12	1943	541,062	+63
1944	138,083	+33	Jan. '48	174,806	+ 5	1944	672,694	+31
1945	130,119	+41	Feb. '48	169,093	+ 8	1945	637,042	+38
1946	112,171	+63	Mar. 48	185,945	— 2	1946	594,364	+48
1947	157,848	+16	Apr. '48	166,898	+10	1947	782,060	+13
1948	183,120		May '48	183,120		1948	879,862	

MAY* INVENTORIES OF RAIL

May '48 Compared to Other Mays (000)			May '48 Compared to Other Months '47 and '48 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
1942	$22,924	+39	Jan. 1, '47	$30,192	+ 6
1943	19,206	+66	Apr. 1, '47	29,775	+ 7
1944	23,081	+38	Jan. 1, '48	32,688	— 2
1945	26,057	+22	Feb. 1. '48	36,120	—12
1946	24,119	+32	Mar. 1, '48	37,341	—15
1947	26,875	+19	Apr. 1, '48	36,572	—13
1948	31,911		May 1, '48	31,911	

MAY* INVENTORIES OF OTHER MATERIAL

May '48 Compared to Other Mays (000)			May '48 Compared to Other Months '47 and '48 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
1942	$386,376	+56	Jan. 1, '47	$476,625	+27
1943	373,565	+62	Apr. 1, '47	519,985	+16
1944	410,114	+47	Jan. 1, '48	560,711	+ 8
1945	448,326	+35	Feb. 1, '48	570,201	+ 6
1946	452,861	+33	Mar. 1, '48	577,078	+ 5
1947	535,071	+13	Apr. 1, '48	587,390	+ 3
1948	603,972		May 1, '48	603,972	

MAY* INVENTORIES OF FUEL

May '48 Compared to Other Mays (000)			May '48 Compared to Other Months '47 and '48 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
1942	$43,820	+42	Jan. 1, '47	$49,873	+25
1943	55,627	+12	Apr. 1, '47	51,207	+21
1944	51,320	+21	Jan. 1, '48	66,606	— 7
1945	51,236	+21	Feb. 1, '48	66,727	— 7
1946	42,918	+45	Mar. 1, '48	65,071	— 5
1947	55,973	+11	Apr. 1, '48	64,153	— 3
1948	62,094		May 1, '48	62,094	

MAY* INVENTORIES OF CROSSTIES

May '48 Compared to Other Mays (000)			May '48 Compared to Other Months '47 and '48 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
1942	$65,552	+41	Jan. 1, '47	$83,891	+11
1943	61,016	+52	Apr. 1, '47	97,549	— 5
1944	80,463	+15	Jan. 1, '48	92,235	+ 1
1945	74,792	+24	Feb. 1, '48	93,492	— 1
1946	77,413	+20	Mar. 1, '48	98,843	— 6
1947	89,906	+ 3	Apr. 1, '48	96,782	— 4
1948	92,711		May 1, '48	92,711	

MAY* INVENTORIES OF SCRAP

May '48 Compared to Other Mays (000)			May '48 Compared to Other Months '47 and '48 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
1942	$10,168	+59	Jan. 1, '47	$12,572	+29
1943	10,105	+60	Apr. 1, '47	11,222	+45
1944	10,319	+57	Jan. 1, '48	13,300	+22
1945	10,414	+56	Feb. 1, '48	13,336	+22
1946	10,959	+48	Mar. 1, '48	16,409	— 1
1947	12,766	+27	Apr. 1, '48	15,783	+13
1948	16,217		May 1, '48	16,217	

MAY* TOTAL INVENTORIES

May '48 Compared to Other Mays (000)			May '48 Compared to Other Months '47 and '48 (000)		
Year	Amt.	% Change	Month	Amt.	% Change
1942	$528,840	+53	Jan. 1, '47	$653,153	+24
1943	519,519	+55	Apr. 1, '47	709,738	+14
1944	575,297	+40	Jan. 1, '48	765,540	+ 5
1945	610,825	+32	Feb. 1, '48	779,876	+ 3
1946	608,270	+33	Mar. 1, '48	794,742	+ 2
1947	720,591	+12	Apr. 1, '48	800,680	+ 1
1948	806,905		May 1, '48	806,905	

*Subject to revision

SOME ECONOMICS OF DIESEL MOTIVE POWER

Estimated annual savings of $582 million in fuel cost and fuel transportation expense from full adoption of Diesel-electric locomotives

By COL. NOTEN D. BALLANTINE

The substitution of Diesel-electric locomotives for all of the steam power on Class I road-haul and terminal railways of the United States would result in the astonishing figure of $582,560,604 in annual savings from just two items alone — cost of fuel and the out-of-pocket expense of transporting it — an amount sufficient to amortize in 5.9 years the net capital investment of $3,447 million.

More than $237 million worth of freight cars—79,097 of them—would be released for commercial service.

Many other advantages would follow, which will be discussed later; however, the full benefit of the transition to Diesel power cannot be realized until all of the steam power is out of service, so that the expensive operation of roundhouses, coal and water stations, and their facilities may be eliminated. In certain cases, where there is a lack of factual information, it has been necessary to estimate, or interpret; however, the text shows where that has been done. The deductions are based upon the monthly statistics of the Interstate Commerce Commission.

Locomotive fuel is the largest single item of expense in the cost of rail transportation. Compared with the prices paid in March, 1947, the increased percentages were: coal, 24.3; fuel oil, 54.8, and Diesel oil, 56.

There is a surprising difference in the weights of the different kinds of fuel used to produce a service-unit. For example, per engine-hour in yard service, compared with the 44.44 lb. used by Diesels, fuel oil weighed 11.9 times and coal 19.6 times as much. Per 1,000 gross ton-miles in freight service, Diesels used 12.24 lb., while fuel oil was 5.97 times and coal 11.19 times as much. In road-haul passenger service, per passenger-train car-mile, Diesels used 2.09 lb.; fuel oil was 4.6 times and coal 10.29 times as much.

In road-haul passenger service, per passenger-train car-mile, Diesels used 2.09 lb.; fuel oil was 4.6 times and coal 10.29 times as much.

Table I—Comparative Weights of Fuel Used

	Costs	
Switch engine-hour	Lb.	Index
Diesel oil, 6.45 gals. @ 7.2 lb.	46.44	100.0
Fuel oil, 65.01 gals. @ 8.5 lb.	552.60	1190.0
Coal	910.00	1960.0
Per 1,000 gross ton-miles		
Diesel oil, 1.7 gals. @ 7.2 lb.	12.24	100.0
Fuel oil, 8.59 gals. @ 8.5 lb. gal.	73.02	596.6
Coal	137.00	1119.3
Per passenger-train car-mile		
Diesel oil, 0.29 gals. @ 7.2 lb. gal.	2.09	100.0
Fuel oil, 1.13 gals. @ 8.5 lb. gal.	9.61	459.8
Coal	21.50	1028.7

The ton-mile proportion of dead-weight to live-load carried varies with each kind of fuel; the estimates used are: coal, 50 tons per carload; tare weight of car, 22.1 tons, with a ratio of 85 per cent empty to loaded car-miles. This means that for every 100 ton-miles of coal hauled, there would be 81.8 ton-

Table II—Fuel Consumption and Transportation—Requirements—March, 1948

Service	Gallons (000)	Tons (000)	No. cars loaded per day	No. cars in use*	Ton-miles—estimated 200-mile haul Net	Tare	Gross
Road freight							
Coal	—	5,409	3,490	52,350	1,081,920-	885,010	1,966,930
Fuel oil	206,143	876	932	5,592	175,222	210,442	385,664
Combined	206,143	6,285	4,422	57,942	1,257,142	1,095,452	2,352,594
Diesel required	152,869	550	548	3,287	110,656	157,132	267,788
Reduction	53,274	5,735	3,874	54,655	1,146,486	938,320	2,084,806
Road Passenger							
Coal	—	1,164	751	11,266	232,831	190,456	423,287
Fuel oil	63,044	268	226	1,356	53,587	64,358	117,945
Combined	63,044	1,432	977	12,622	286,418	254,814	541,232
Diesel required	47,609	171	171	1,026	34,279	48,676	82,955
Reduction	15,435	1,261	806	11,596	252,139	206,138	458,277
Yard service							
Coal	—	1,315	848	12,720	262,934	215,080	478,014
Fuel oil	26,998	1,149	97	582	229,769	275,953	505,722
Combined	26,998	2,463	945	13,302	492,703	491,033	983,736
Diesel required	21,308	766	76	456	153,295	184,107	337,402
Reduction	5,690	1,697	869	12,846	339,408	306,926	646,334
Summary savings							
Road, freight	53,274	5,735	3,874	54,655	1,146,486	938,320	2,084,806
Road, passenger	15,435	1,261	806	11,596	252,139	206,138	458,277
Yard service	5,690	1,697	869	12,846	339,408	306,926	646,334
Total	74,399	8,693	5,549	79,097	1,738,033	1,451,384	3,189,417

*Based on an estimated 15-day turn-around time for coal cars and 6 days for tanks

miles of dead-weight for the round-trip. For fuel oil weighing 8.5 lb. per gal., a 9,000-gal. tank car would hold 38.3 tons. The tare of the tank car is about 23 tons, with a ratio of 100 per cent empty to loaded car-miles, i.e., they make as many empty as loaded miles. Therefore, for each 100 ton-miles of fuel oil carried, there would be 120.1 ton-miles of dead-weight. Diesel oil, at 7.2 lb. per gal. will weigh 32.4 tons per tank car; it has the same ratio of empty to loaded as fuel oil and the same tare, so that for every 100 ton-miles of Diesel oil, there would be 142 ton-miles of dead-weight. These are the factors used to develop the gross ton-miles for each kind of fuel. Based on 50 tons per car for coal, and 9,000-gal. tank cars, a 15-day turn for coal cars and 6 days for tanks, and an estimated haul of 200 miles, the gross ton-miles to move the coal and fuel oil, together with those for the Diesel oil required to do the work performed by steam power, is developed in Table II. Computed at an out-of-pocket expense of five mills per gross ton-mile, the cost would be $15,937,085, at the rate of $191,245,020 per year, for transporting locomotive fuel. The gross ton-miles of company fuel represents 2.79 per cent of the total gross ton-miles. The combined weight of coal and fuel oil consumed in March, 1948, was 6.84 times the weight of Diesel oil required to do the same amount of work; in other words, 221.8 million gallons of Diesel oil is equal to 296.2 million gallons of fuel oil, plus 7,888,419 tons of coal.

Storage of coal on the ground and its attendant loss would be avoided; only 75 per cent of the facilities for storing fuel oil would be needed for Diesel oil requirements. Substantial salvage values should be realized from the disposal of unneeded coal, oil, and water facilities.

Table III—Consumption and Cost of Locomotive Fuel

Service	Coal Tons	Fuel oil Gallons
Road, freight	5,409,598	206,142,979
Road, passenger	1,164,153	63,044,226
Yard	1,314,668	26,997,909
Combined	7,888,419	296,185,114
Diesel oil to replace both	—	221,786,382
Net reduction in fuel	7,888,419	74,398,732
		Costs
Total cost coal @ $5.02 per ton		$39,599,863
Total cost fuel oil @ 5.45¢ gal.		16,142,089
Combined cost coal & fuel oil		55,741,952
Cost Diesel oil substitute @ 10.43¢ gal.		23,132,320
Net reduction in fuel cost, month March		$32,609,632
At the per annum rate of		$391,315,584
Add the reduction in cost transporting		$191,245,020
Combined estimated savings per annum		$582,560,604

The consumption and cost of locomotive coal and fuel oil used in March, 1948, together with the Diesel requirements as a substitute are shown in Table III. The cost per switch engine hour for Diesels was $0.673, for coal-burning steam it was $2.284 or 3.39 times, and for oil burners, $3.543, or 5.26 times the cost of Diesels. The cost per 1,000 gross ton-miles for Diesels was $0.177; for coal, $0.344 or 1.9 times; and for fuel-oil burners it was $0.468 or 2.64 times the cost of Diesels. The cost per passenger-train car-mile was $0.030 for Diesels; for oil-burners it was $0.062, more than 2 times; and for coal burners, $0.054, or 1.8 times the cost of Diesels.

The tractive force of a locomotive depends upon

Atchison, Topeka & Santa Fe

Alco-G.E. Diesel-electric and 10 lightweight cars in Cajon Pass, California

the adhesive friction of its drive wheels with the rails. The drive wheels of steam locomotives are close together, concentrating their weight within a relatively short distance. Aside from that, considering the locomotive proper, freight locomotives have 59 per cent and passenger locomotives 81 per cent as many nondriving wheels as there are driven. This is based on averages of 12 conventional types each, of freight and passenger power. In addition, steam locomotives have 8 to 12 wheels under the tenders. Diesels have no tenders, but carry sufficient fuel on each unit to make runs of from 700 to 800 miles. With Diesel power, there is not nearly such concentrated weight and nearly all of the axles are motorized.

The locomotive ratings, or tons they will haul over the ruling grades, govern the size of all trains. There is a very distinct relationship between speed and tons hauled. If speed is to govern, then it can be obtained only by sacrificing tonnage, and that means running more trains in both directions.

Speed of trains shown in I.C.C. reports is determined by dividing the train-miles by the train-hours between terminals. No data are available as to the intermediate delays, such as taking coal and water, meeting trains, doing station work, and other interruptions, facts which need to be known, and deducted from the time between terminals, the balance being used as the divisor.

Only in this manner is it possible to ascertain the free-running-time speed.

To compare properly the ton-miles per train-mile, more information is needed about the amount of power available, as well as the free-running-time speed. For example: Diesel locomotives handling trains may consist of a single unit having 1,000, 1,500, or 2,000 hp.; however, to meet varying traffic demands, trains need two, three, or four coupled units, which illustrates the wide variation possible.

The tons hauled per ton weight of locomotives and tenders in freight service was 6.74 for fuel oil burners, 7.11 for coal-burners, and 8.69 for Diesels. That means that for a given weight of power, Diesels hauled 28.9 per cent more than oil-burning locomotives, and 22.2 more than coal-burning locomotives. This is determined by dividing the gross ton-miles of cars, contents and cabooses, by the gross ton-miles of locomotives and tenders. No similar data are available for passenger service.

The weight of the average locomotive hauling freight trains in March was 276 tons for steam and 319 tons for Diesels. The weight of a Diesel unit with 1,350 hp. is approximately 115 tons; on that basis, there would be 2.77 units per train, having 3,740, or say 4,000 hp. Similar data for passenger service are not available.

Motive Power Assignments

The I.C.C. shows the assignment of locomotives by types and class of service; however, it does not break down the information by types for the active, stored and unserviceable. Nor is there information as to train-miles in through, way-freight and branch-line service. The locomotive assignments, and estimates of their use are set forth in Table IV.

Table IV—Assignment of Motive Power as of March, 1948 — Class I Road-Haul and Terminal Railways

Service	Steam, number	Diesel, number	Elect., number	Others, number	Total, number
Road, freight	19,644	1,223	314	2	21,183
Road, passenger	5,169	750	284	1	6,204
Yard	9,918	3,146	168	17	13,249
Total	34,731	5,119	766	20	40,636
per cent of total	85.5	12.6	1.9	—	100.0

Assigned	Estimated Distribution: Number serviceable					Unserviceable	
			Per cent		Per cent		Per cent
Steam	Number	Active	Tot	Stored	Tot	Number	Tot
Freight	19,644	15,283	77.8	974	5.0	3,387	11.9
Passenger	5,169	3,854	75.3	319	6.2	996	19.3
Yard	9,918	8,455	85.2	281	2.8	1,182	11.9
Total	34,731	27,592	79.5	1,574	4.5	5,565	16.0
Diesels:							
Freight	1,223	1,162	95.0	—	—	61	5.0
Passenger	750	712	95.0	—	—	38	5.0
Yard	3,146	2,989	95.0	—	—	157	5.0
Total	5,119	4,863	95.0	—	—	256	5.0
El. and Others							
Freight	316	300	95.0	—	—	16	5.0
Passenger	285	271	95.0	—	—	14	5.0
Yard	185	176	95.0	—	—	9	5.0
Total	786	747	95.0	—	—	39	5.0
Gd. total	40,636	33,202	81.7	1,574	3.9	5,860	14.4

To a large extent, steam locomotives are now protecting way freights, branch line, and short runs. Diesels, when put into that service, will not be able to average the same number of miles per day that they do while engaged largely in through service. No data are available, but it is known that about 30 per cent of the total freight train mileage is in way-freight service, which means that about 35 per cent of the steam freight train mileage is in that service. Using that as a base, Table V indicates how an estimate has been made as to the number of Diesels needed to replace steam. Of the combined steam and Diesel service, Diesels handle 15 per cent of the locomotive-miles and 20 per cent of the gross ton-miles.

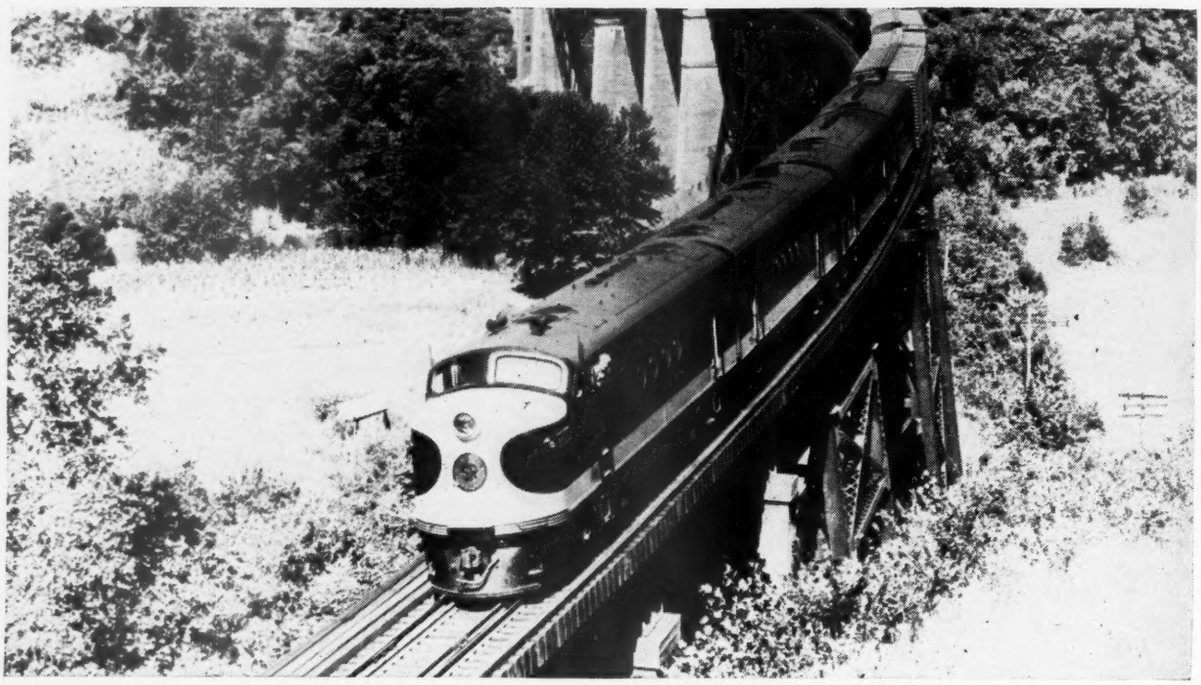
Table V — Estimated Breakdown of Steam Locomotive Mileage — Road Freight Service, March, 1948

Class of service	Daily miles: Number	Per cent Tot	No. active locos.	Mi. per loco. day	Estimated equivalent Diesel horsepower*: Per loco.	Total
Through	970,999	65.0	9,140	106.	4,000	36,560,000
Way and branch	522,845	35	6,143	90	1,500	9,214,500
Combined	1,493,844	100.0	15,283	97.7	2,995	45,774,500
Stored	—	—	974	—	2,995	2,917,130
Unserviceable	—	—	3,387	—	2,995	10,144,065
Total assigned	—	—	19,644	—	2,995	58,835,695
Diesels required to replace						
Through	970,999	65.0	4,412	220.1	4,000	17,648,000
Way and branch	522,845	35.0	5,249	100.0	1,500	7,873,500
Combined	1,493,844	100.0	9,661	154.6	2,642	25,521,500
Stored	—	—	232	—	2,642	612,944
Unserviceable	—	—	276	—	2,642	729,192
Total assigned	—	—	10,169	—	2,642	26,863,636
Decrease in steam	—	—	9,475	—	2,995	31,972,059

*Horsepower of steam locomotives, is not developed except at high speeds, therefore it is not strictly comparable with Diesel horsepower.

To purchase 26,863,636 Diesel horsepower for freight locomotives at $100 per horsepower would involve a capital outlay of $2,686,363,600.

There are even fewer details available with respect to passenger service. Diesels are now making 34.4 per



Electro-Motive freight locomotive crossing the Cumberland river near Burnside, Ky.

cent of the combined steam and Diesel passenger locomotive mileage. It is assumed that practically all of the Diesel mileage is on the fast and through trains; also that 25 per cent of the steam locomotive mileage is in through service. The details of the estimates are set forth in Table VI.

Table VI — Estimated Breakdown of Steam Locomotive Mileage — Road Passenger Service, March, 1948

Class Service	Daily miles Number	% tot.	No. active Locos.	Mi. per loco.-day	Estimated equivalent Diesel horsepower* per loco.	Total
Through	160,988	25.0	641	200.0	4,000	2,564,000
Short and br.	482,933	75.0	3,213	150.0	1,500	4,819,500
Combined	643,921	100.0	3.854	167.1	1,916	7,383,500
Stored	.....	....	319	....	1,916	611,204
Unserviceable	.....	....	996	....	1,916	1,908,336
Grand total	.....	....	5,169	....	1,916	9,903,040
	Diesels required to replace					
Through	160,988	25.0	358	450.0	4,000	1,432,000
Short and br.	482,933	75.0	2,415	200.0	1,500	3,622,500
Combined	643,921	100.0	2,773	232.0	1,823	5,054,500
Stored	.....	....	265	....	1,823	483,095
Unserviceable	.....	....	160	....	1,823	291,680
Grand total	.....	....	3,198	....	1,823	5,829,275
Decrease in steam	.....	....	1,971	....	1,916	4,073,765

* Horsepower of steam locomotives is not developed except at high speeds, therefore it is not strictly comparable with Diesel horsepower.

To purchase 5,829,275 hp. of Diesel passenger power at $100 per hp. would involve a capital outlay of $582,927,500.

The yard service problem is relatively simple; Table VII shows the method used to estimate the Diesel power required to displace steam.

To purchase 5,942,000 hp. of Diesel yard locomotives, at $90 per hp., would involve an outlay on $534,780,000, and would provide units with an increased horsepower of 17.6 per cent over the estimated horsepower of steam power replaced.

Table VII—Estimated Diesel Requirement to Replace Steam Locomotives—March, 1948

Yard service	Daily hours Number	Active locos. Number	% tot.	Hrs. per loco.-day	Estimated equivalent Diesel horsepower* per loco.	Total
Steam	106,567	8,455	85.3	12.6	850	7,186,750
Stored	.....	281	2.8	...	850	238,850
Unserviceable	.....	1,182	11.9	...	850	1,004,700
Total	.....	9,918	100.0	...	850	8,430,300
	Diesels required to replace					
Diesel	106,567	5,465	92.0	19.5	1,000	5,465,000
Stored	.....	180	3.0	...	1,000	180,000
Unserviceable	.....	297	5.0	...	1,000	297,000
Total	.....	5,942	100.0	...	1,000	5,942,000
Decrease in steam	.....	3,976	....	...	850	2,488,300

* Horsepower of steam locomotives is not developed except at high speeds, therefore, it is not strictly comparable with Diesel horsepower.

Table VIII—Summary

Class service	No. steam locomotives Displaced	No. Diesel locomotives to purchase	Equivalent horsepower	Cost per hp.	Total cost
Road, freight	19,644	10,169	26,863,636	$100	$2,686,363,600
Road, passenger	5,169	3,198	5,829,275	$100	582,927,500
Yard	9,918	5,942	5,942,000	$90	534,780,000
Total	34,731	19,309	38,634,911	$98	$3,804,071,100

Scrap value of 34,731 steam locomotives	$119,088,000	
Value of 79,097 freight cars released	237,291,000	
Off-set credit to capital account	$356,379,000	$356,379,000
Net capital investment		$3,447,692,100
Annual savings in operating expense		
Cost of fuel		$391,315,584
Cost transporting company fuel		191,245,020
Total		$582,560,604
Time required to amortize net capital investment, years		5.9

Comparisons of operating statistics, Diesels versus steam, for the month of March, 1948, are presented in Table IX.

Table IX—Statistics, March, 1948

	Steam	Diesels	
ROAD, FREIGHT SERVICE	Number	Number	% Steam
Miles per locomotive-day, assigned	76.0	209.2	275.2
Miles per locomotive-day, active ..	97.7	220.1	225.3
Gross ton-miles per:			
Assigned locomotive-day	147,665	579,900	392.7
Active locomotive-day	189,802	610,343	321.6
Locomotive-hour, on road	29,708	59,131	199.0
Locomotive-mile	1,942	2,773	142.8
Per locomotive-day:			
Assigned locomotive-hours	471,456	29,352	6.2
Active locomotive-hours	366,792	27,888	7.6
Locomotive-hours worked per:			
Active locomotive-day	6.39	10.32	161.5
Locomotive-miles per:			
Hour, on road	15.3	21.3	139.2
Average weight, locomotive and tender, tons	276.	319.	115.6
ROAD, PASSENGER SERVICE			
Miles per locomotive-day:			
Assigned	124.6	451.1	362.0
Active	167.1	475.2	284.4
Passenger-train car-miles per:			
Assigned locomotive-day	1,025	4,887	476.8
Active locomotive-day	1,374	5,150	374.8
Locomotive-hour, on road	282	495	175.6
Locomotive-mile	8.22	10.84	131.9
Locomotive-miles per hour, on road .	34.3	45.7	133.2
Locomotive-hours per active locomotive-day	4.97	10.40	209.3
YARD SERVICE			
Locomotive-hours worked per day ...	106,567	58,357	54.8
Number 8-hour tricks per day	13,321	7,295	54.8
Hours worked per			
Assigned locomotive-day	10.7	18.6	173.8
Active locomotive-day	12.6	19.5	154.8

Train and engine service men received 26 per cent of the total wages paid to railway employees in March, 1948. They are the highest paid of all employees working on an hourly basis; their wages were, for straight time, $1.395, which was 18.5 per cent over all others; their overtime earnings were $1.967, or 12.7 per cent above all others. In addition to being paid for the mileage they actually ran, they were paid for 12 per cent of that mileage, for miles not run. With crews consisting of five or six men, their combined wages amounted to from $6.98 to $8.37 per straight-time hour, and from $9.84 to $11.80 per overtime-hour. That emphasizes the need of reducing overtime; Diesels would certainly have an important bearing in that direction; however, there are no data available from which to evaluate what it would amount to.

Wages of train and engine service men are based on mileage made, or hours worked, whichever makes the highest amount for the men. For example: In freight service, the mileage base is 12.5 miles per hour, 100 miles, or 8 hours constitute a day. When the speed of freight trains average 25 miles an hour, the crews receive a day's wages for 4 hours work, an increase of 100 per cent over the basic rate. Labor contracts generally limit the earnings of their members, so that with the step-up in train speeds, now generally being done, some of the crews earn their monthly limit in three weeks, or less.

Diesels should, and generally do, appeal to the engine crews, because operating a Diesel locomotive is a "white-collar job." A good illustration of this point came to me recently while riding in the cab of a Diesel locomotive on a high-speed passenger train. I asked the "old timer" running it how he liked operating a Diesel, compared with running a steam locomotive, to which he replied, "if you won't quote me, I'll say it is the nearest thing I know of to getting money under false pretenses, for work done."

On the relative cost of locomotive repairs, I have been unable to get anything that to me reflects the real situation. However, from first-hand information, I know it to be considerably less than the repairs to motive power that will do the same amount of work. In the early days, many railroads were not so particular about educating their men in the technique of handling Diesels, with the result that repair cost in such cases is unreasonably high, because motors and resistors were burned out through ignorance in the handling, in servicing, or both. There has been some sabotage also.

Under proper training, many of the workmen in shops and roundhouses can be made into satisfactory material to handle Diesel repairs. Where the enginemen and repair forces are properly trained, and supervised, there is little excuse for burning up the motors and resistors.

With the relatively large tractive force of Diesels at starting, and with properly trained enginemen, drawbar pull-outs will decrease; damage to lading will be less, and the rear-end train-crew will not be shaken up to anything like what they get on a long steam-drawn train. Freight cars not subjected to the steam train jerks will certainly cost less for repairs; however, I do not know how the benefits can be evaluated, with the information available.

The Diesel percentage of the combined steam and Diesel service-units made in March, 1948, was: Locomotive-miles in freight service, 14.6; in passenger service, 34.4; in yard service, 35.4; for all services, 25.4; gross ton-miles 19.6; and passenger-train car-miles, 51.2.

Conclusion

Every effort should be made to substitute Diesel for steam power at the earliest practicable date. To that end, the railroads and manufacturers should together work out a program.

The potential domestic market, at the level of the present traffic demand, would be 39 million hp., made up of 27 million for freight, and 6 million each for passenger and yard service.

During the transition period, the steel-mill production should be helped by the scrap from locomotives that could not be disposed of to better advantage. There would be no need to draw upon the steel mills for the steel required to build 80,000 freight cars. The public would get the immediate benefit of cars, as rapidly as released from company service; progressively, there would be over 280,000 tons of coal per day to satisfy demands.

The oil situation too, should be relieved, because 170,343 barrels of Diesel oil per day would take the place of 227,485 barrels of fuel oil, which in effect is to say that if, from a given amount of crude oil, 100 barrels of fuel oil is now produced, only 75 barrels of Diesel oil would be needed. Here too, the railroads and the oil companies should together work out a program.

GENERAL NEWS

Will Investigate Ban on Basing-Point Prices

Copeland of Harvard will head Senate group's advisory council

Melvin T. Copeland, director of business research for Harvard University's School of Business Administration, will head an advisory council of the special Senate subcommittee which is investigating the effect of the Supreme Court's April 26 decision upholding the Federal Trade Commission's "cease and desist" order against the cement industry's basing-point system of pricing. This was announced on July 30 by the subcommittee's chairman, Senator Capehart, Republican of Indiana, who also said that public hearings in connection with the committee's investigation would get under way about the middle of November.

The court's decision was noted in the *Railway Age* of May 1, page 55, and the implications of the F.T.C. policy as a threat to long-haul railroad traffic were discussed by Leon Leighton in an article appearing in the issue of June 26, page 120. In announcing the Senate committee's plan to study the situation, Senator Capehart said "there has been increasing confusion among businessmen all over the country as to the meaning of the decision as applied to them."

"The purpose of this committee," he also said, "is to start out with a free and open mind to find out what pricing policies are for the best interests of the whole country. Not only are businessmen confused, but so are economists, lawyers and financial writers. When companies within the same industry—as in the cement industry—turn to their legal staffs, they get widely divergent and even directly opposite interpretations of the court decision. Unfortunately, the confusion is growing worse, not better.

'Out of this confusion, manufacturers are anxiously seeking answers to such questions as: Will the Supreme Court decision make it illegal for a seller to pay any part of the freight charges to the buyer's destination—which he may consider essential to meet competition? . . . Did the court outlaw a universal delivered price by a manufacturer? . . . Will the court's decision increase or decrease the price the consumer must pay for finished goods? Our committee proposes to study these and similar questions from every angle, and lay the answers before Congress. What we're after is to find out what pricing policies will best serve the competitive forces of free enterprise and the economic stability of the nation."

Other members of the committee are Senators Brewster of Maine and Hawkes of New Jersey, Republicans, Johnson of Colorado and McMahon of Connecticut, Democrats. The advisory council to be headed by Dr. Copeland will consist of 25 members, "representing labor, agriculture, buyers and sellers in both heavy and light goods industries. William Simon, Chicago attorney, will serve as general counsel of the committee. The Capehart announcement described him as one with "wide experience in Sherman Anti-Trust, Federal Trade Commission, and Clayton Act matters."

6 Months Net Income Totaled $259,000,000

Net railway operating income for the same period was $410,938,920

Class I railroads in the first six months of 1948 had an estimated net income, after interest and rentals, of $259,000,000, as compared with $225,000,000 in the corresponding period of 1947, according to the Bureau of Railway Economics of the Association of American Railroads. The six-months' net railway operating income, before interest and rentals, was $410,938,920, as compared with $373,771,066.

Estimated results for June showed a net income of $94,000,000, as compared with $44,000,000 for June, 1947, while the net railway operating income for the 1948 month was $124,979,063, as compared with $61,249,090 in June, 1947. In the 12 months ended with June, the rate of return averaged 3.60 per cent, as compared with 3.72 per cent for the 12 months ended with June, 1947.

According to the A.A.R. statement, approximately one-fourth of the net railway operating income for June resulted from the reduction in payroll taxes payable by the railroads under the recently-enacted Wolverton amendments to the Railroad Unemployment Insurance Act. The A.A.R. said that the new sliding scale tax basis—which became law June 23, retroactive to January 1—resulted in non-recurring credits of more than $30,000,000 in June on account of previous overpayment of unemployment taxes. It also observed that the "greater part" of the remainder of the increased June net came from increases in rates and fares and in mail pay authorized so far this year by the Interstate Commerce Commission.

Gross in the first six months amounted to $4,606,719,256, compared with $4,154,066,332 in the same period of 1947, an increase of 10.9 per cent. Operating expenses amounted to $3,648,907,092, compared with $3,249,687,460, an increase of 12.3 per cent. Twenty-six Class I roads failed to earn interest and rentals in the six months, of which 11 were in the Eastern district, four in the Southern region and 11 in the Western district.

Class I roads in the Eastern district in the six months had an estimated net income of $89,000,000, compared with a net income of $87,000,000 in the same period of 1947. For June, their estimated net income was $39,000,000, compared with $21,000,000 in June, 1947.

The same roads in the six months had a net railway operating income of $172,505,583, compared with $157,917,592 in the same period of 1947. Their net railway operating income in June amounted to $62,772,768, compared with $32,114,808 in June, 1947.

Gross in the Eastern district in the six months totaled $2,116,109,553, an increase of 10.1 per cent compared with the same period of 1947, while operating expenses totaled $1,708,150,905, an increase of 11.4 per cent.

Class I roads in the Southern region in the six months had an estimated net income of $47,000,000, compared with a net income of $35,000,000 in the same period of 1947. For June, they had an estimated net income of $11,000,000, compared with $4,000,000 in June, 1947.

The same roads in the first six months had a net railway operating income of $69,828,951, compared with $56,921,937 in the same period of 1947. Their net railway operating income in June amounted to $13,845,147, compared with $7,372,396 in June, 1947.

Gross in the Southern region in the six months totaled $659,704,806, an increase of 10.2 per cent compared with the same period of 1947, while operating expenses totaled $510,733,702, an increase of 9.3 per cent.

Class I roads in the Western district in the six months had an estimated net income of $123,000,000, compared with $103,000,000 in the same period of 1947. For June, they had an estimated net income of $44,000,000, compared with a net income of $19,000,000 in June, 1947.

The same roads in the six months

had a net railway operating income of $168,604,386, compared with $158,931,537 in the same period of 1947. Their net railway operating income in June amounted to $48,361,148, compared with $21,761,886 in June, 1947.

Gross in the Western district in the six months totaled $1,830,904,897, an increase of 12.1 per cent compared with the same period of 1947, while operating expenses totaled $1,430,022,485, an increase of 14.5 per cent.

CLASS I RAILROADS-UNITED STATES

	Month of June 1948	1947
Total operating revenues	$838,105,949	$697,822,483
Total operating expenses	626,079,812	550,353,240
Operating ratio—per cent	74.70	78.87
Taxes	72,690,939	72,201,217
Net railway operating income (Earnings before charges)	124,979,063	61,249,090
Net income, after charges (estimated)	94,000,000	44,000,000
Six months ended June 30,	1948	
Total operating revenues	$4,606,719,256	$4,154,066,332
Total operating expenses	3,648,907,092	3,249,687,460
Operating ratio—per cent	79.21	78.23
Taxes	461,205,853	448,841,796
Net railway operating income (Earnings before charges)	410,938,920	373,771,066
Net income, after charges (estimated)	259,000,000	225,000,000

Human Relations Course Starts Fourth Year

Starting off the fourth year of the "human relations" program of the Southern Pacific, top officers of the road on July 30 concluded a two-day refresher course. All have been students in previous years. First inaugurated in June, 1945, the road's training subsequently has been made available to some 11,000 employees on the company's Pacific lines, and early this year was extended to cover the Texas & Louisiana lines as well.

Basically, the course consists of conference-type meetings at which are discussed the simple principles of how to get along with people. There is a strong element of self-interest in the course which makes for an enthusiastic reception, as set forth in a feature article in *Railway Age* of July 12, 1947, page 68.

Schenley Trucking Operations Considered Private Carriage

Applying again with renewed emphasis the principles it has evolved in determining the distinction between private and for-hire trucking, Division 5 of the Interstate Commerce Commission has ruled that transportation operations of the Schenley Distillers Corporation, as presently conducted, are those of a private carrier. The principles, established in *Woitishek Common Carrier Application*, 42 M.C.C.193, involve the so-called "primary business" and "for compensation" tests.

The present report in No.MC-107079 points up the division's view that the "primary business" test is the "basic" one. "Compensation for transportation," it says, "may be collected by a private carrier as such or indirectly and it may even include an incidental element of profit provided the transportation is not 'for compensation' in the sense that it is performed with a purpose or aim to profit as a carrier. To be a common or contract carrier by motor vehicle, there must be transportation *for compensation* by one so engaged as a business and with an *intent* or *purpose* to profit from the compensation."

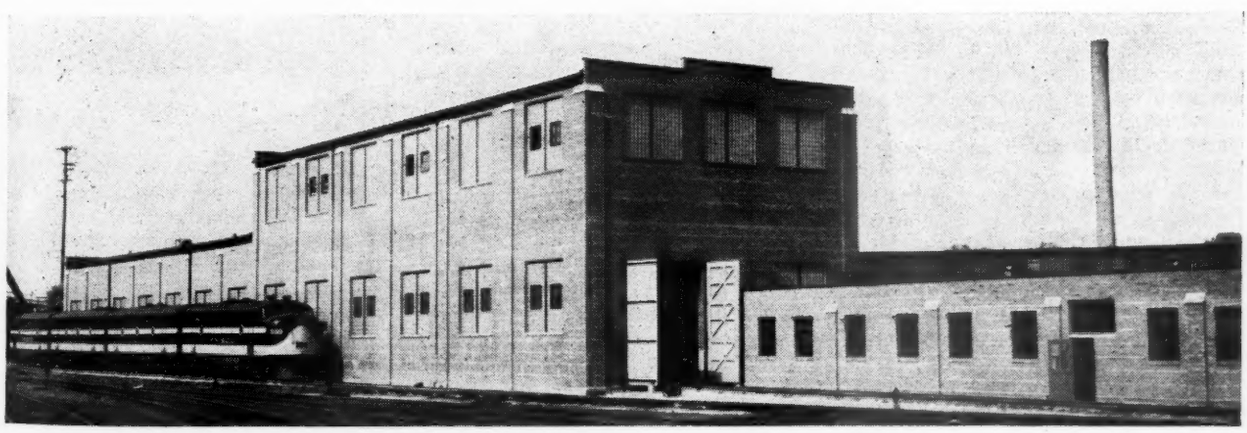
The Schenley application, which is disposed of in the present report, sought a permit authorizing operations as a contract carrier of alcoholic liquors and materials and supplies used in their manufacture and sale; but the report notes that Schenley filed it "solely to determine its status and no attempt was made . . . to meet the statutory burden of establishing that the proposed operation will be consistent with the public interest and the national transportation policy."

The application was a sequel to a 1945 commission determination that Schenley's former trucking operations, which were performed by a subsidiary corporation, were those of a contract carrier; and that the subsidiary, Schenley Distilleries Motor Division, Inc., had failed to make the showing required for the issuance of a permit. This commission determination was upheld by the United States Supreme Court in a January 2, 1946, decision.

Thereafter, the subsidiary was dissolved, and the performance of the trucking services was taken over by the parent corporation. That is the arrangement found in the present report to be private carriage. Under it, Schenley purchases and takes title to the entire output of case liquors of its subsidiary distilling companies at the distilleries. The sale of such liquor to Schenley customers is on an f.o.b.-origin basis when shipment is to be by rail or motor carrier; when Schenley trucks make the deliveries, the price is on an f.o.b.-destination basis, the transportation factor being "roughly equivalent to the rail rate from origin to destination."

Also, there are the inbound movements of supplies to the distilleries for which Schenley receives no "direct compensation." These operations, too, are private carriage, the division found. It described them as operations "closely approximating those of a gratuitous bailee who indirectly recaptures all of his costs, however, without receiving any compensation as such or any profit."

The decision represents the view of Chairman Lee and Commissioner Patterson, although the latter is listed only



FRISCO DIESEL SHOP AT ST. LOUIS—The St. Louis-San Francisco has constructed this new shop at its Lindenwood yards, St. Louis, Mo., for use exclusively in servicing and maintaining Diesel passenger locomotives. The building is 260 ft. long and has two 155-ft. electrically lighted pits. An overhead 25-ton crane, with a 5-ton auxiliary lift, is in service for handling traction motors. Other features of the shop include truck transfer tables, the characteristic elevated working platforms, and a water demineralizing plant. The new shop was built at a cost of $275,000

as concurring "in the result" of the majority report. Commissioner Rogers, the third member of the division, filed a brief dissent, expressing his view that the trucking involved was "that of a carrier for hire."

Cartoon Character Illustrates T. & P. Finances for Employees

To afford employees of the Texas & Pacific a clearer and fuller understanding of how the road made and spent its money during 1947, the T. & P. has published a financial report minus the usual technical terms. Complex statistical data are presented interestingly with the aid of a cartoon character based on the road's emblem—"Red Diamond"—who is the protagonist of the booklet's tale.

For example, "Red" is shown holding a box car in one hand and two passengers in the other as a means of comparing freight and passenger operations during the year. Income from miscellaneous sources is illustrated by his pouring of coffee for passengers in a dining car. A complete summary of the road's financial operations is condensed on the last page of the publication.

Edward Hungerford Dies

Edward Hungerford, whose interest in railroading was a dominant factor throughout the major part of his lifetime, died on July 29, in his seventy-third year, after a colorful career as public relations impressario and author of innumerable articles and more than a dozen books on railroading.

Born in Dexter, N. Y., on December 21, 1875, Mr. Hungerford attended Williston Seminary, Easthampton, Mass.; Cascadilla School, Ithaca, N. Y.; and Syracuse University, and held an LL.D., awarded to him by St. Lawrence University in 1936. When he was 21 he went to work on The Rochester Herald, doing newspaper jobs ranging from reporting to editing, and he subsequently served with The New York Sun and The Glens Falls (N.Y.) Times. In 1906 he became publicity representative for the Brooklyn (N. Y.) Rapid Transit Company, and in 1911 he went with Wells Fargo & Co. as advertising manager.

Mr. Hungerford was centenary director of the Baltimore & Ohio from 1925 to 1928, in charge of the "Fair of the Iron Horse," held in Baltimore, Md., in 1927. He joined the New York Central as assistant vice-president, public relations department, in 1928, and in 1930 became a special representative of the Central.

One of Mr. Hungerford's major promotion projects was the 1939 New York World's Fair pageant of transportation progress, "Railroads on Parade." This was the feature presentation of the railroad exhibit. The pageant was written by Mr. Hungerford, and the production was assembled by 27 Eastern railroads, with a cast of 250 actors, actresses, dancers and singers who took part in depicting historical events in American railroad history.

ERIE WILL USE CLEVELAND UNION TERMINAL IN 1949

Erie passenger trains will use the Cleveland Union Terminal early in 1949, Robert E. Woodruff, president of the Erie, announced July 30, agreements with the terminal company having been completed after extended negotiations.

At the same time Mr. Woodruff announced that coinicident with the shift to this station, all Erie passenger trains operating in and out of the terminal will be completely Dieselized on the run between Cleveland and Pittsburgh. For this purpose nine 2,000 horsepower Diesel-electric locomotives have already been ordered, of which five are for the Erie and four for the Pittsburgh & Lake Erie, which roads operate a joint Pitttsburgh and Cleveland service.

The actual date of entrance by the Erie into the Cleveland Union Terminal is contingent on the delivery of the Diesels, now promised for March, 1949. Construction of new connecting trackage will be completed before that time.

With Diesel-powered trains and easier access into the terminal, running time will be shortened somewhat, Mr. Woodruff said, although actual schedules have not been worked out as yet. By using the new route the Erie will avoid crosssing the Cuyahoga river at two points where movement of trains sometimes is interrupted by drawbridge operations.

The Erie operate 12 trains in and out of Cleveland daily, including two between Cleveland and New York, and one daylight train to Washington, D. C., via the Pittsburgh & Lake Erie and Baltimore & Ohio. The Erie's entry in the Union Terminal is the first since 1934 when the Baltimore & Ohio transferred its operations there.

Plans call for the construction of 4,628 feet of new track to make the connection into the terminal. Upon completion of the arrangements, the Erie station at West 9th Street, built in 1875 will be abandoned.

Railroads to Participate in Truck Size and Weight Study

A detailed study of the relation of truck loadings to highway and bridge design has been launched by the Highway Research Board in cooperation with the Public Roads Administration of the Federal Works Agency and other groups, including the Association of American Railroads. The purpose of the study, according to the P.R.A., is to determine economic load limits for highway vehicles, taking into account transportation requirements, the cost of hauling and highway costs.

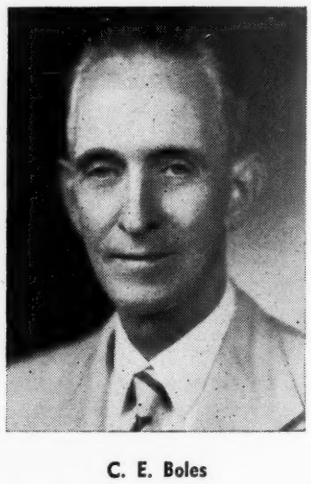
Another phase of the study is designed to provide data on other operation costs, such as expenditures for tires and repairs, and depreciation. Bus operation will be included in that and subsequent phases. A study also will be made of the demand for truck transport in loads of various magnitudes, where loads originate, in what size and where they are delivered. Terminal practices and costs also will be examined.

In order to measure stresses in selected bridges, the A.A.R. has loaned to the board special stress-measuring equipment.

New Bureau of Finance Director Started with Commission in 1921

C. E. Boles, whose appointment as director of the Bureau of Finance of the Interstate Commerce Commission, effective August 1, was reported in *Railway Age* of July 31, page 52, entered the service of the commission on April 11, 1921. He succeeds Oliver E. Sweet, who voluntarily retired, effective July 31.

Mr. Boles holds the degrees of A.B. from Bethel College and LL.B. from Columbia University and is a member of the bar of the Supreme Court of Kentucky. He has served as senior examiner in both the section of securities and the section of convenience and necessity of the Bureau of Finance, and



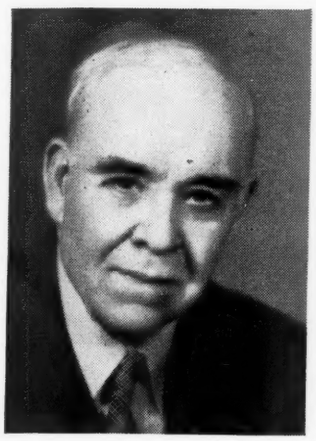
C. E. Boles

from August 17, 1926, to April 16, 1935, was chief of the former. Since April 16, 1935, until his present appointment, Mr. Boles has been assistant director of the bureau.

Mr. Sweet was born in Silverton, Colo., on June 3, 1882, and was educated at the University of South Dakota, from which he received an A.B. degree in 1904 and an LL.B. in 1906. Following graduation from college, Mr. Sweet engaged in general law practice for eight years and for six and one-half years was attorney for the Railroad Commission of South Dakota. He also served as assistant attorney general for the state of South Dakota from

1915 to 1921. Mr. Sweet joined the commission's staff in 1921 and after serving as an examiner and attorney was named director of the B. of F. in 1930.

R. T. Boyden who has been named to succeed Mr. Boles as assistant director of the bureau, entered the service of the commission in August, 1915, and



Oliver E. Sweet

since 1934 has served as chief of the loans and reorganizations section of the same bureau. A graduate of George Washington University with degrees of B. S. in civil engineering and LL.B., Mr. Boyden is a member of the bars of the federal district court and the Court of Appeals for the District of Columbia.

Northwest Board Gets Ready For Bumper Grain Crop

"It looks like a bumper crop in Northwest Board Territory," declared General Chairman S. M. Low, western traffic manager of Koppers Company, in his opening remarks before the 85th regular meeting of the country's oldest shippers advisory board at Duluth, Minn., on July 22. Until the rains came early in July, it was anticipated that the grain crop would be down 10 to 20 per cent under 1947, but now the crop may be as large or better.

Railroads and shippers were warned by grain experts that the car situation will be worse than ever, because the harvesting of the grain is compressed into a shorter period each year. Under the old stacking and threshing methods of harvesting, the movement to get grain under cover consumed three months or more. Then, with the combined harvester, the harvesting period was compressed to three weeks. Now a new swathing machine, well within the purse-power of the grain farmer, combined with a new-type thresher, is on the market which will enable each producer to do his own work, rather than wait for contract gangs, and further narrow the harvest to within seven to ten days in a given territory.

The board passed a resolution urging the grain trade to maintain personnel on weekends and holidays during the peak season, August 15 to September 30, to receive and sample grain. The membership also authorized the appointment of a committee of three—all representing trade associations—to intervene in the government war traffic reparations case now before the Interstate Commerce Commission, on the ground that collection of huge "overpayments" from the railroads would seriously prejudice their future ability to provide service and facilities to commercial shippers. According to the initiator of the move, the reparations case is not a rate case, and therefore the board may properly seek representation.

WESTINGHOUSE BUYS BALDWIN STOCK; RALPH KELLY ON LEAVE OF ABSENCE

An agreement has been reached whereby the Baldwin Locomotive Works will sell to Westinghouse Corporation 500,000 shares of authorized but unissued $13 par value common stock of Baldwin at a price of $15.11 per share. This price is based on the average of the daily closing prices at the New York Stock Exchange of Baldwin common stock during the period July 1 through July 28. Upon the listing and the issuance of the addditional 500,000 shares, there will be a total of 2,375,553 shares of Baldwin common stock outstanding, of which Westinghouse will own, including shares previously acquired, approximately 21.68 per cent.

In this connection Gwilym A. Price, president of Westinghouse Electric Corporation, and Charles E. Brinley, chairman of the board of the Baldwin Locomotive Works, issued the following joint statement:

"For many years Westinghouse and Baldwin have collaborated closely in the development and design of various types of railroad locomotives. The acquisiton by Westinghouse of a substantial but minority common stock interest in Baldwin is a natural step which should materially benefit both companies through the strengthening of the cooperation which has existed in the past. It will now be possible to take full advantage of the experience, know-how and plant facilities of both companies which will place 'Baldwin-Westinghouse' in a favorable position to meet the competition of other manufacturers."

The Baldwin board last week elected Marvin W. Smith, of Pittsburgh, Pa., executive vice-president and a director of the company. For the past ten years Mr. Smith has been a vice-president of Westinghouse and the chief engineering officer of that company.

In a supplementary statement Mr. Brinley stated that the arrangements whereby Westinghouse has acquired an interest in Baldwin were initiated at the suggestion of Ralph Kelly, president of Baldwin, and that the completion of these arrangements has made it possible for Mr. Kelly to exercise his expressed desire to be relieved of executive responsibilities and thus to be afforded greater freedom for personal and civic activities. Accordingly, Mr. Kelly has been granted a leave of absence for the remainder of his term of the office as president. Mr. Brinley also stated that at a time when Mr. Kelly was a vice-president of Westinghouse it was Mr. Kelly who had recommended the election of Mr. Smith as a vice-president of that company. Mr. Kelly will continue as a member of the Baldwin board of directors.

Further Hearing in Ex Parte 163 Scheduled for September 20

The Interstate Commerce Commission has set September 20 as the date of further hearings in the Ex Parte 163 proceeding, wherein the Railway Express Agency is seeking a permanent increase in rates. The hearing will be held before the commission's Division 2 at its Washington, D. C. offices.

As reported in *Railway Age* of September 27, 1947, page 69, the commission earlier that month authorized the R. E. A. to increase its l.c.l. rates for one year or until further order of the commission, subject to the requirement that the R. E. A. consider the formulation of a single scale of rates for nationwide application. It also directed the R. E. A. to undertake further studies similar to those made in the early part of 1947 to determine the effect on its traffic and revenues of the rates authorized in September and of the rates under such a single nationwide scale.

The R. E. A. already has filed for the period January 16 to February 29 an analysis of the effect on its traffic and revenues of the rates authorized last September. It has until September 10, however, to submit its studies with respect to the single scale.

"Big Steel" Urges Rate Cut From Pittsburgh Mills

Two subsidiaries of the United States Steel Corporation, the Carnegie-Illinois Steel Corporation and the American Bridge Company, have proposed to Eastern railroads that they make reductions in freight rates aggregating approximately 40 per cent on various iron and steel articles moving from the Pittsburgh, Pa., district to the New York and Detroit areas.

U. S. Steel's President Benjamin F. Fairless asserted that freight rate reductions to these important consuming areas would have a beneficial effect in furthering the distribution of steel products produced in the Pittsburgh area, which, on an industry basis, accounts for approximately two-fifths of the overall steel production in the United States.

Mr. Fairless said that, in anticipation of an increasing tendency by steel consumers to divert to other forms of transportation, shipments which formerly moved by rail, the railroads in their

own interest should favor substantial reductions in their freight rates. He said that this action by steel consumers has been intensified by the recent change in pricing methods of United States Steel subsidiaries from a basing point to a mill basis.

On January 20, 1944, in an address before the Pittsburgh Chamber of Commerce, Mr. Fairless said: "If unfair freight rates prevent the Pittsburgh steel mills from reaching the consuming markets of the country in the postwar period, then the new steel facilities now being built in this area may prove to have been a mistake, and the decline of Pittsburgh as an important steel center must then be expected."

A letter asking for consideration of these lowered freight rates has been addressed by the two subsidiary companies to the traffic executives of the Eastern lines.

Railroads to Sponsor Musical Comedy Broadcasts

The railroad industry, through the Association of American Railroads, will sponsor the broadcasting of a series of musical comedy hits beginning this fall, William T. Faricy, president of the A.A.R., has announced. During the fall and winter months, the musical comedy program will be broadcast once a week. A substitute program will be presented during the summer.

Mr. Faricy also announced that the public relations department of the A.A.R. has established a radio and television unit designed particularly to provide information to AM, FM and TV stations throughout the nation. This broadening of the A.A.R.'s information services, he said, will meet the growing needs of broadcasters and telecasters.

Bureau of Mines Lends Gas-Turbine To Locomotive Development Group

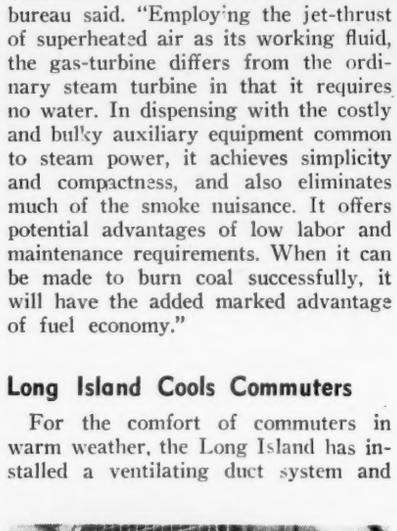
Under a cooperative agreement announced by James Boyd, director of the Bureau of Mines of the Department of Interior, a large gas-turbine once destined for Russia under the lend-lease program will be made available to the Locomotive Development Committee of Bituminous Coal Research, Inc., for experimentation in the use of pulverized coal as a fuel for gas-turbine locomotives. The information gained from these tests will be used in completing the design of two experimental coal-burning gas-turbine locomotives now being constructed by the committee. The 40,000-cu. ft. per min. unit was obtained by the bureau from the War Assets Administration.

Following the committee tests, which will be conducted at its laboratory in the Dunkirk, N. Y., plant of the American Locomotive Company, the gas-turbine will be returned and the data obtained will be made available to the bureau for use in its allied research on the production of synthetic liquid fuels from coal. According to the bureau, the committee, supported by nine major railroads and four coal producers, is working on a $2,800,000 research program designed to adapt powder-fine bituminous coal to the gas turbine.

"If successful—and gas turbine proponents are optimistic—it may reverse the trend in recent years toward the diesel-electric locomotive and preserve coat as the dominant railroad fuel," the bureau said. "Employing the jet-thrust of superheated air as its working fluid, the gas-turbine differs from the ordinary steam turbine in that it requires no water. In dispensing with the costly and bulky auxiliary equipment common to steam power, it achieves simplicity and compactness, and also eliminates much of the smoke nuisance. It offers potential advantages of low labor and maintenance requirements. When it can be made to burn coal successfully, it will have the added marked advantage of fuel economy."

Long Island Cools Commuters

For the comfort of commuters in warm weather, the Long Island has installed a ventilating duct system and

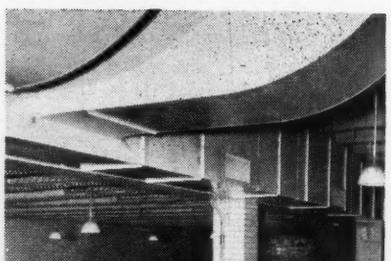


One of the fourteen platform fans receives the attention of a commuter and two girls distributing copies of the railroad's publication for passengers

a number of motor-driven fans in 33rd street above the Long Island concourse at Pennsylvania Station, New York.

The duct system is run along the ceiling, with a number of openings so arranged that the ducts may be used for exhausting warm air from the concourse or for bringing in fresh air from the street level, depending on outside temperature conditions. Air is moved in either direction through the ducts by a motor-driven 42-in. fan delivering 21,500 cu. ft. of air per minute.

To make waiting on the platform more comfortable, the railroad also has



Ventilating ducts in the Long Island concourse at Pennsylvania Station

installed 14 electric blower fans over the platforms. Each of these 28-in. diameter fans has a capacity of 12,500 cu. ft. of air per minute. The total cost of the installation was $33,500.

Determines Maximum Terminal Areas for Truckers, Forwarders

Maximum terminal areas of motor carriers and freight forwarders within which transportation by motor vehicle by, or for, such carriers or forwarders is exempt from regulation except as to qualifications and maximum hours of service of employees and safety of equipment have been determined by the Interstate Commerce Commission. The report by the commission's Division 5 also construed the operating authorities of motor carriers and forwarders as they apply at the terminal areas involved.

The latter was necessary because the authorities of the truckers and forwarders merely named the municipalities and unincorporated communities authorized to be served without defining adjacent territory which the commission said was impliedly covered. Generally the terminal areas defined in the report will be coextensive with the commercial zones of the respective municipalities and unincorporated communities, as defined by the commission in previous reports in the proceeding—Ex Parte No. MC-37.

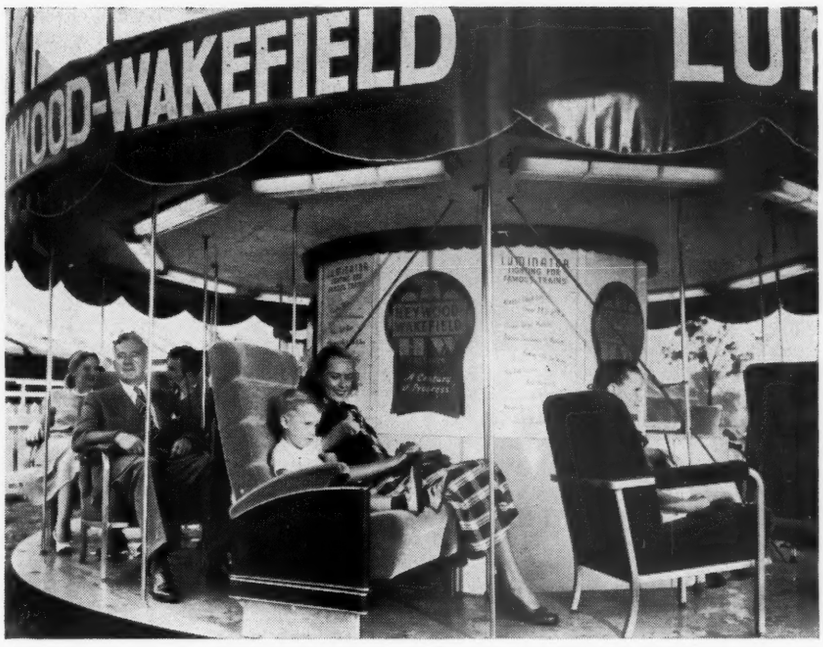
The prior reports include those wherein the commission dealt specifically with some municipalities and that wherein it set out general rules for the determination of commercial zones not covered by the special reports. The general report was dated November 26, 1946, and made public two months later, as noted in the *Railway Age* of January 11, 1947, page 100. It was confined to arrangements for administration of the act's section 203(b) and left arrangements for the administration of section 202(c) for subsequent consideration, which has now been given in the present report.

Section 203(b) provides that transportation by motor vehicle within a municipality or between contiguous municipalities, or within a zone commercially a part of any such municipality or municipalities, shall be conditionally exempt from regulation except as to qualifications and maximum hours of service of employees and safety of equipment. Section 202(c) provides a like exemption for trucking operations in terminal areas, by or for motor carriers or forwarders, in the performance of transfer, collection or delivery services.

The present report's finding as to the maximum terminal areas of truckers and forwarders at incorporated municipalities is that areas shall include "all points or places which are within the commercial zone of such municipality as defined by this commission and not beyond the territorial limits, if any, fixed in the operating authority of such motor carrier or freight forwarder." The terminal areas at any unincorporated community shall consist of: "(a) all points or places in the United States which are located within the territorial limits, if any, of the operating authority of the motor carrier or freight forwarder involved, and within 2½ miles of the post office at such authorized unincorporated point if it has a population less than 2,500, within 4 miles if it has a population of 2,500 but less than 25,000, or within 5½ miles if it has a population of 25,000 or more; (b) all of any municipality, any part of which is included under (a) of this finding; and (c) any municipality wholly surrounded by any municipality included under (b) of this finding, or so wholly surrounded except for a water boundary."

The findings construing the operating authorities determined that they authorize terminal services within maximum terminal areas defined on the foregoing bases—"excluding in the case of grants of authority to serve Los Angeles, Calif., points in the Los Angeles Harbor zone other than those within the municipal limits of Los Angeles." In the latter connection, the commission recalled that, "because of unusual circumstances there existing," it found in *Los Angeles, Calif., Commercial Zone,* 3 M.C.C.248, that removal of the commercial-zone exemption as it would have applied to trucking between the Los Angeles Harbor district, including Long Beach, on the one hand, and Los Angeles, on the other, was "necessary to carry out the national transportation policy." Thus it defined at these points two commercial zones—the Los Angeles zone and the Los Angeles Harbor zone, both of which include a part of the city of Los Angeles.

The present report represents the view of Commissioners Lee and Rogers, a dissenting opinion having been filed by Commissioner Patterson, the third member of Division 5. It was Mr. Patterson's view that the commission "should not, by general rules, attempt to establish the terminal areas . . . or construe existing certificates and permits to the extent proposed by the majority." The general rules of the majority report, the dissenting commissioner added, "result, in most instances, in enlargement of the territory which motor carriers and freight forwarders may serve without any showing of public convenience and necessity or consistency with the public interest as required by the act, notwithstanding that such motor carriers and freight forwarders may not seek such enlargement of their territory and may be vigorously opposed to same because of the additional obligation to serve thereby placed upon them."



More than 4,000 riders tried out the carrousel fitted with Heywood-Wakefield railway coach seats on the opening day of the Chicago Railroad Fair. Lighting effects were created by Luminator, Inc.

Appellate Court Asked to Dismiss Injunction Against 3 Op Unions

Department of Justice this week asked the Court of Appeals for the District of Columbia to dismiss the permanent injunction which Justice T. Alan Goldsborough of the federal district court for the District of Columbia issued last month to restrain the three holdout operating unions and their leaders from staging a strike. As an alternative, the D. of J. asked the court to remand the case to the jurisdiction of the district court with instructions to dismiss.

The case went to the appellate court on the government's motion, following the refusal by Justice Goldsborough on July 29 to dismiss the injunction. Upholding the brotherhoods' contention that dismissal might kill their chance for a higher court ruling on its legality, Justice Goldsborough said he would take no action that might "in any way" interfere with the appeal. "To do otherwise," he said, "would not only be juvenile, not only immature, but exceedingly unfair."

Meanwhile, representatives of management and the three unions—the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen & Enginemen and the Switchmen's Union of North America—this week were continuing the conferences at which they have been working on contracts to apply the basis for settlement agreed upon with Dr. John R. Steelman, assistant to President Truman. The conferences have included meetings with Dr. Steelman who had agreed to be the arbiter of any differences arising in connection with the writing of the contracts (see *Railway Age* of July 17, page 34).

"North Coast Limited" Modernization Cost $9.8 Million

Replacement of all first-class accommodations on the Northern Pacific's Diesel-electric powered "North Coast Limited" with brand-new equipment was started on July 8 when the first of a fleet of new lightweight, streamlined observation-lounge cars, with private sleeping rooms, and all-room Pullman cars were placed in service out of St. Paul, Minn. E. E. Nelson, passenger traffic manager of the road, announced that similar new cars will be placed in service each week until all first-class sleeping car accommodations on the train are new. New streamlined coaches and head-end cars were placed on the

"North Coast" in 1946 and 1947, and six new lightweight diner-lunch cars were placed in service in September of the latter year. Replacement of first-class accommodations will complete a $9,800,000 modernization program for the train which was started in 1945.

The new observation-lounge cars have 25 chairs, a writing desk, tables, magazine rack, radio, a buffet, four double bedrooms and one "extra large luxury compartment." Each of the new first-class sleeping cars placed in service contains six roomettes, eight duplex-roomettes, three double bedrooms and one compartment. All of the cars are carpeted in brown, with furniture upholstered in tan and brown. Room and lounge walls and ceilings are two tones of green.

G. M. Diesel Engine for Texas Lubricants Research

A full-size, 600-hp. Diesel engine of the type powering General Motors locomotives has been installed in the Beacon Research Laboratories of the Texas Company at Beacon, N. Y., for the purpose of studying locomotive lubricants.

The purpose of the tests is to "tailor" lubricants to the specific requirements of railroad Diesel engines and to enable the petroleum engineer to make controlled studies of field problems. The laboratory will use the engine particularly to study the effectiveness of additives in lubricants on engine cleanliness and on the performance of piston rings, bearings, wrist pins and other parts.

The six-cylinder engine is mounted on a cast-iron bed plate and anchored to bed rock. The engine will be tested under conditions simulating railroad operations, such as stopping and starting and running under varying loads and grades.

Vacationers Revealed Transport Preferences in Magazine Survey

Almost 80 per cent of the families planning vacations this year and who responded to a questionnaire in a recent issue of Pathfinder, a national news magazine, expected "to see America first," it was announced recently. Among those planning vacations, the choice of transportation was ranked as follows: Private automobile, 55.5 per cent; railroad, 20.7 per cent; bus 9.8 per cent; steamship, 6.7 per cent; airplane, 5.1 per cent; other, 0.5 per cent; and no mention, 1.7 per cent. The survey also indicates the various amounts of money family groups plan to spend on their vacations as well as the types of accommodations preferred.

Canadian Rate Increase a National Political Issue

Active political opposition is expected to the proposal of the Canadian railroads to increase freight rates—15 per cent at once, on an interim basis, and 20 per cent on a permanent basis after adequate hearing—particularly as the Liberal party, now in control of the government, has been on the defensive in parliamentary discussions of the railroads' affairs since a 21 per cent freight rate increase was authorized March 30 by the non-political Transport Commission. A general election is expected to be held in Canada within the next few months, and the rate controversy will be one of the foremost issues in the campaign, it is predicted.

. The Socialist party, whose spokesmen have assailed the present administration repeatedly for its freight-rate stand, has indicated that, if it should obtain control of the Canadian government, one of its principal objectives would be nationalization of the Canadian Pacific. The Socialist leader, M. J. Coldwell, has said, however, that if this program should be put through that road and the present Canadian National would continue to be operated as separate organization.

Freight Car Loadings

Loadings of revenue freight for the week ended July 31 totaled 894,381 cars, the Association of American Railroads announced on August 5. This was 11,815 cars, or 1.3 per cent, above the previous week, but 27,210 cars, or 3.0 per cent, below the coresponding week last year and 4,010 cars, or 0.4 per cent, below the equivalent 1946 week.

Loadings of revenue freight for the week ended July 24 totaled 882,556 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading
For the Week Ended Saturday, July 24

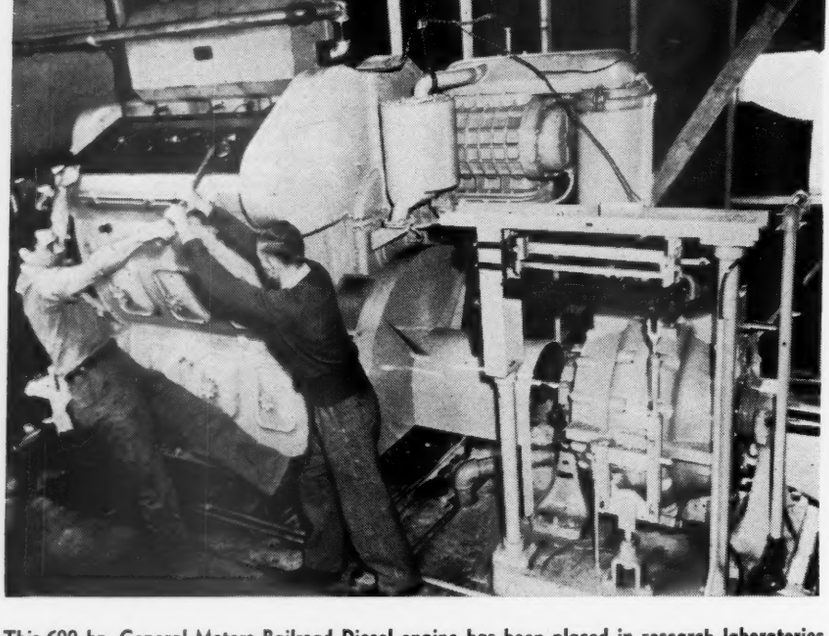
District	1948	1947	1946
Eastern	153,909	162,336	162,226
Allegheny	179,218	191,193	191,327
Pocahontas	75,542	71,209	73,861
Southern	130,678	131,405	137,046
Northwestern	137,137	146,311	137,991
Cent. Western	137,197	144,998	140,278
Southwestern	68,885	72,476	67,784
Total Western Districts	343,219	363,785	346,053
Tot. All Roads	882,566	919,928	910,513
Commodities:			
Grain and grain pdts.	64,989	72,927	59,121
Livestock	9,425	12,414	17,962
Coal	187,473	177,907	188,293
Coke	14,478	14,008	13,827
Forest pdts.	52,938	51,194	51,600
Ore	82,839	88,535	72,322
Mdse. l.c.l.	98,874	112,259	120,931
Miscellaneous	371,550	390,684	386,457
July 24	882,566	919,928	910,513
July 17	892,527	919,735	921,496
July 10	755,760	807,117	895,082
July 3	757,366	629,204	679,775
June 26	888,582	846,141	879,544
Cumulative total, 30 weeks	24,055,419	24,945,581	22,422,728

In Canada.—Carloadings for the week ended July 24 totaled 78,436 cars as compared with 77,702 cars for the previous week and 79,848 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
July 24, 1948 ...	78,436	31,316
July 26, 1947 ...	79,848	34,446
Cumulative Totals for Canada:		
July 24, 1948 ...	2,220,512	1,035,166
July 26, 1947 ...	2,175,841	1,100,492

Pullman-Standard and New Haven Share Honors at Worcester

Customers of railroads must be willing to pay rates that will enable the roads to provide improved equipment, facilities and service, Richard L. Bow-



This 600-hp. General Motors Railroad Diesel engine has been placed in research laboratories of the Texas Company for testing the performance of railroad-type lubricants

H. W. BURTNESS TO RESIGN

Harold W. Burtness, president of the Chicago Great Western, with headquarters at Chicago, has announced his intention to resign, effective September 1, "for personal reasons." Mr. Burtness will continue his connection with the road as a member of the board of directors and executive committee.

ditch, president of the New England Council, declared in an address August 3 at "New Haven Day" ceremonies at the Osgood Bradley plant of the Pullman-Standard Car Manufacturing Company at Worcester, Mass.

The observance marked 115 years of business relationship between the New York, New Haven & Hartford and the Osgood Bradley organization. Other speakers were Mayor Sullivan of Worcester; Howard S. Palmer, president of the New Haven; Champ Carry, president of Pullman-Standard; and Richard Chase, district manager of Pullman-Standard. The program was broadcast over the Yankee network.

Making a plea for public understanding of the part played by the railroads in the national economy, Mr. Carry said "it is fair to say that the job done by the railroads during the war and since then is concrete evidence that they are indispensable and synonymous with the high standard of living that prevails in this country . . . There is no question that under private ownership the railroads are essential to the welfare of this country and deserve the whole-hearted support of our entire population."

Production of parlor-lounge cars, diners and grill cars for the New Haven is now under way at the Worcester plant, which recently completed delivery of 103 new coaches for this road.

Additional General News and a listing of Meetings and Conventions appear on pages 62 and 63.

Locomotives

Date	Purchaser	No.	Type	Builder
July 3	A.T. & S.F.	10	1,000-hp. D.-E. sw.	Baldwin
July 3	Union	7	1,500-hp. D.-E. trans.	Baldwin
July 10	S.P.	30	6,000-hp. D.-E. frt.	Electro-Motive
		40	1,000-hp. D.-E. sw.	Electro-Motive
		15	1,500-hp. D.-E. rd.sw.	Baldwin
		10	70-ton D.-E. sw.	General Electric
July 24	T. & P.	6	6,000-hp. D.-E. frt.	Electro-Motive
		4	4,500-hp. D.-E. frt.	Electro-Motive
		1	4,000-hp. D.-E. pass.	Electro-Motive
July 31	N.Y.C. & St. L.	10	2-8-4	Lima-Hamilton

Freight Cars

July 3	Clinchfield	500	50-ton Hopper	American Car & Fdy.
July 10	N.C. & St.L.	500	50-ton Hopper	Pullman-Standard
		500	50-ton Gondola	Pullman-Standard
July 10	Ala. Gt. So.	150	Gondola	Pressed Steel
July 10	D.L. & W.	300	50-ton Box	Magor
		200	50-ton Box	Pullman-Standard
		100	70-ton Cov. Hopper	American Car & Fdy.
July 17	Clinchfield	35	70-ton Cov. Hopper	American Car & Fdy.
July 17	Copper Range	23	50-ton Box	Pullman-Standard
July 17	D. & H.	300	50-ton Box	R.R. Shops
		200	50-ton Gondola	R.R. Shops
July 17	G.T.W.	500	50-ton Box	American Car & Fdy.
		200	50-ton Box	Pullman-Standard
July 17	G.M. & O.	500	50-ton Gondola	American Car & Fdy.
		500	50-ton Hopper	Pullman-Standard
July17	K. C. S.	400	70-ton Hopper	Pullman-Standard
July 17	Mather Stock Car	100	40-ton Refrig.	Co. Shops
July 17	S.A.L.	150	70-ton Hopper	Pullman-Standard
		100	70-ton Cov. Hopper	Pullman-Standard
July 17	Western Md.	50	50-ton Auto	Greenville
July 24	D.L. & W.	500	50-ton Hopper	American Car & Fdy.
July 24	St. L.-S.F.	700	55-ton Hopper	Pullman-Standard
July 24	S.A.L.	200	70-ton Cov. Hopper	Greenville
July 31	C. & O.	1,000	70-ton Hopper	American Car & Fdy.
July 31	St. L.-S.F.	300	55-ton Hopper	Pullman-Standard

Passenger Cars

July 3	S.P.	30	Sleeping	Budd
		20	Chair	Budd
		6	Bag--Mail	Budd
		6	Dining	Budd
		6	Lounge	Budd
		5	Dormitory	Budd
		5	Coffee Shop-Lge.	Budd
July 10	D.L. & W.	10	Coach	Pullman-Standard
		10	Coach	American Car & Fdy.

EQUIPMENT AND SUPPLIES

Domestic Equipment Orders Reported in July

Domestic orders for 123 Diesel-electric and 10 steam locomotives, 8,008 freight cars (including 100 ordered by a private car line) and 98 passenger cars were reported in *Railway Age* in July. The estimated cost of the locomotives is $34,852,000, and the freight cars will cost approximately $31,231,200. The passenger cars will cost about $12,000,000. Of the 7,908 freight cars ordered by railroad, 500 will be built in railroad shops and the 100 ordered by a private car line will be built in the company's own shops. The accompanying table lists the orders in detail.

During the first seven months of 1948, *Railway Age* has reported domestic orders for 643 Diesel-electric locomotives, plus 19 additional Diesel units, and 69 steam locomotives, costing an estimated $155,207,000; a total of 56,497 freight-train cars, the estimated cost of which is $221,954,700; and 362 passenger-train cars, at an estimated cost of $42,250,000.

Diesel Road Locomotives Being Built for Argentina

The Argentine State Railway has accepted the final design drawings for 65 double-unit Diesel-electric locomotives which the General Electric Company is constructing under an $18,000,000 contract. Featuring compact design with streamlined appearance, the locomotives are being built in three types to meet operating conditions found on Argentina's railroads.

Largest of the three types will be a twin-unit, 2,000-hp. locomotive designed for operation in the Andes, where tracks

Artist's drawing of one of the two-unit, 2,000-hp. Diesel-electric locomotives being built by General Electric Company for the Argentine State Railway

go up two-and-one-half per cent grades at 15,000 ft. above sea level. Each cab will contain a 1,000-hp. Diesel engine, which will power 6 motor-driven axles. There will be 23 locomotives of this type.

For operation on the plains, especially in the vicinity of Buenos Aires, another twin-unit type will be built which will be identical wth the first type, but will have eight instead of 12 motor-driven axles with one idle axle in the center on each truck. Twelve of these locomotives are to be built.

The remainder of the order will consist of 30 locomotives which will have two units nominally rated at 1,000-hp. each. These also will have eight motor-driven axles, but will differ from the other types in that they will be powered by two 500-hp. Diesels in each cab.

All 65 locomotives are being constructed at the Erie Works of the General Electric Company, where the first Diesel engine is being readied for test. Deliveries are scheduled to begin in 1949.

Said to have more horsepower per ton than any meter-gage machines ever designed, these locomotives will enable the Argentine railroads to run heavier trains on faster schedules, thus adding to their capacity and giving better service to the country. The design is a direct result of a six-months study which an International General Electric transportation specialist made in Argentina last year.

FREIGHT CARS

8,706 Freight Cars Built Last Month

Freight cars produced last month for domestic use totaled 8,706, including 1,832 built in railroad shops, compared with June production of 10,387, including 2,650 built in railroad shops, the American Railway Car Institute announced this week. New freight cars ordered last month for domestic use, the institute said, amounted to 11,923, which included 2,686 ordered from railroad shops, compared with June orders for 5,873, including 250 ordered from railroad shops. The backlog of freight cars on order and undelivered on August 1 was 125,093, including 36,142 on order from railroad shops.

The **Missouri Pacific** has scheduled construction of 1,000 42½-ft. 70-ton gondolas to begin in February, 1949, in the road's De Soto, Mo., shops, 500 of these cars being for the Gulf Coast Lines and 500 for the International-Great Northern.

The **Bangor & Aroostook** has ordered 100 50-ton all-steel side-discharge pulpwood cars from the Magor Car Corporation. These cars will augment 100 similar cars purchased in 1946. Delivery is expected during the second quarter of 1949.

SIGNALING

The **New York, New Haven & Hartford** has ordered equipment from the General Railway Signal Company for the installation of Type SC searchlight signals between Poughkeepsie, N. Y., and Maybrook, 28 mi. Type K relays and welded steel relay cases are included in this order.

CAR SERVICE

The Interstate Commerce Commission has issued Service Order No. 780-B, effective August 1, so as to again require 25 per cent of the carload minimum to be loaded in cars of lumber forwarded from Washington and Oregon points to be stopped to complete loading. The order vacates Service Order No. 780-A, which had suspended the basic order from June 15 to October 15.

ORGANIZATIONS

The 36th **National Safety Congress and Exposition,** sponsored by the National Safety Council, will be held in Chicago October 18-22. The public safety exposition and traffic safety sessions (including that of the Railroad section) will be held at the Sherman Hotel. Program and other information can be obtained from George Burns, National Safety Council, 20 N. Wacker Drive, Chicago 6.

The **Pacific Railway Club** will hold its 371st meeting on August 12, at 7:30 p.m., in conference room No. 1 at the Biltmore Hotel in Los Angeles, Cal. The subject of the program will be "Rail Transportation of Perishable Products."

CONSTRUCTION

Wabash.—This company has awarded a contract to the Bates & Rogers Construction Corp. for the construction of a coaling station at Chicago, at an estimated cost of $25,000.

St. Louis-San Francisco.—The Interstate Commerce Commission has denied a petition filed by the Midland Valley which had asked the commission to (1) either postpone the effective date of its order permitting this company to construct a 1.2-1 mile line near Hackett, Ark.; or (2) attach to its certificate a condition permitting joint use by the M. V. of the line authorized to be constructed. As reported in *Railway Age* of June 26, page 140, the commission's Division 4, in approving the Frisco's application, at the same time dismissed for want of jurisdiction an M.V. application for authority to construct an 0.5-mile branch from Excelsior to the new tipple.

Texas & Pacific.—The Interstate Commerce Commission has extended from September 1 to December 1, 1949, the time within which this company will be required to complete the construction of a line extending 15.1 miles from Ville Platte, La., to Opelousas. (See *Railway Age* of April 26, 1947, page 874).

Missouri Pacific. — The following projects are now in preparation or in progress: installation of 55,000 barrel Diesel oil storage tanks at North Little Rock, Ark., and Osawatomie, Kan., at an estimated cost of $45,000 and $41,800, respectively—contract awarded to Pittsburgh-DesMoines Steel Company, Des Moines, Iowa; install 73 mi. of automatic block signals between McGehee, Ark. and Collinston, La., at an estimated cost of $304,300—work to be performed by company forces; construct new south main track on new grade adjacent to present north main, and remove existing main track, at Chamois, Mo., at an estimated cost of $113,000—grading completed by Porter-DeWitt Construction Company of Poplar Bluff, Mo.—balance of work to be carried out with company forces; reconstruct approaches to Bridge 25 at Archie, Mo., as steel beam spans with creosoted timber ballast deck on concrete pile bents, using five spans, each approximately 30 ft. long.

ABANDONMENTS

Division 4 of the Interstate Commerce Commission has **authorized:**

Chicago, Burlington & Quincy. — To abandon approximately 5,900 ft. of switching track at Metropolis, Ill., and to discontinue a free Ohio river towage service between Metropolis and Paducah, Ky., 12 miles. The applicant told the commission that it has had no requests in more than 15 years to perform the towage service.

Moore Central.—To abandon its entire 10-mile line from Cameron, N. C., to Carthage, subject to the condition that the road sell the line, or any portion thereof, to any responsible person or firm for continued operation and at not less than the net salvage value of the property.

Southern.—To abandon that portion of its so-called Rome-Attalla line extending approximately 50 miles from a point within the switching limits of Rome, Ga., to a point 2 miles east of Gadsden, Ala., and within the switching limits of Attalla. A similar application, filed in 1943, was denied by the commission,

which then held that sufficient trucking facilities were not available to move the traffic. The commission now has found, however, that such a situation no longer exists.

According to the commission, the line is lightly constructed, poorly maintained and operated at "considerable loss" primarily for the benefit of a few small communities. As to the contention of protestants that the branch could be operated at a profit if the Southern would utilize it for handling all Rome-Gadsden traffic which it finds expedient to route via another line, the commission said "carriers should be free to use their facilities in such manner as they deem necessary for the promotion of efficiency and economy rather than for the purpose of maintaining a line which the local shippers cannot support."

SUPPLY TRADE

Percy W. Smith, whose appointment as eastern manager of the **General Railway Signal Company** was announced in *Railway Age* of July 24, was born in Springville, N. Y., on February 2, 1900. He received his higher education at the Rochester Institute of Technology, Rochester, N. Y., and during summer vacations he worked as foreman for the Westinghouse-Church-Kerr Company, and also for the Buffalo, Rochester & Pittsburgh (now the Baltimore

Percy W. Smith

& Ohio). In 1921 he joined the American Locomotive Company as draftsman and, in 1922, he entered the service of the B.R.&P. as draftsman in the mechanical engineer's office. He resigned in 1923 to join General Railway Signal as a draftsman, later advancing to engineer in the engineering department. Mr. Smith was appointed sales engineer in September, 1937, and was promoted to resident manager, New York office, in January, 1945, the position he held until his recent appointment.

Also announced in the same issue were the appointments of **Arthur E. Heimbach** as western manager, **Carl D. A. Henze** as resident manager of the Chicago office, and **Benjamin P. Wayne** as assistant treasurer. Mr. Heimbach was born in Allentown, Pa., on December 23, 1902. He was graduated with a degree in electrical engineering from Pennsylvania State College in 1924,

Arthur E. Heimbach

after which he completed a two-year apprenticeship course of the Union Switch & Signal Co. He later worked as engineer for this company until 1927, in which year he joined the Pittsburgh & Lake Erie as train control supervisor. Mr. Heimbach was appointed assistant signal engineer in 1931, assistant signal and telegraph engineer in 1933, and principal assistant engineer in 1937. In July, 1941, he joined General Railway Signal as sales engineer in Chicago and in January, 1945, he was promoted to resident manager of the Chicago office, the position he

Carl D. A. Henze

held at the time of his recent promotion.

Mr. Henze was born February 25, 1886, in Albany, N. Y. He began his business career in 1901 as a draftsman with the Standard Signal Company, Green Island, N. Y., and in 1903 worked as a draftsman and estimator with the Pneumatic Signal Company. In 1904, when the Taylor and Pneumatic Signal companies formed General Railway Signal, he was engaged in estimating, commercial engineering and construction work. In 1906 he joined the Federal Signal Company as office engineer and construction foreman in Chicago and in 1909 was transferred to Albany, N. Y., as superintendent of construction. Mr. Henze was appointed resident manager at Albany in 1911 and, when the Federal Signal Company merged with General Railway Signal in 1924, he was appointed assistant resident manager in Chicago.

Benjamin P. Wayne

Mr. Wayne was born July 21, 1892, at Hilton, N. Y. He began his business career in 1912 with the Yawman & Erbe Manufacturing Co. In 1915 he joined General Railway Signal at Rochester, N. Y., first as a clerk in the commercial department for two years, and later as employment manager for four years. He was promoted to secretary to the president in 1921 and in 1929 he assumed additional duties of assistant secretary of the company, with headquarters in New York. In September, 1943, he also was appointed secretary to Electrons, Inc. Mr. Wayne was promoted to secretary of General Railway Signal in January, 1945.

Paul E. Thomas has been promoted to chief engineer of the **Carnegie-Illinois Steel Corporation** at Gary, Ind., succeeding **J. Donald Rollins,** who has been promoted to planning engineer, with headquarters at Pittsburgh, Pa.

Cutler-Hammer, Inc., Milwaukee, Wis. has acquired the business of the West Electric Products Company, 1795 Pasadena avenue, Los Angeles, Cal. **W. G. Tapping,** Cutler-Hammer district sales manager, will be in charge of the new plant. Sale of the firm's products in the Los Angeles area will continue to be handled at 1331 Santa Fe Avenue, Los Angeles 21, Cal.

The present operating personnel of the West Electric Products Company

will be retained as Cutler-Hammer employees. The new plant will be integrated with other Cutler-Hammer plants in the manufacture of motor control, panelboards, lifting magnets, magnetic brakes, electric heating devices and allied electric apparatus.

Loren J. O'Brien has been appointed chief engineer of the railway division of Spicer Manufacturing, a division of the **Dana Corporation.** He will be in charge of all railway engineering, including the Spicer positive generator drive and

Loren J. O'Brien

all types of bevel gear applications. Mr. O'Brien was formerly associated with the Gleason Works, Rochester, N. Y., where he worked in various phases and types of bevel gear engineering since 1935.

Walter L. Turner, Jr., associate editor of *Railway Age* and Railway Engineering and Maintenance, with headquarters at Chicago, has been promoted to eastern engineering editor of *Railway Age* and eastern editor of Railway Engineering and Maintenance, with head-

Walter L. Turner, Jr.

quarters at New York, and will take up his new duties about September 1. **Norris V. Engman** has been appointed associate editor of *Railway Age* and Railway Engineering and Maintenance, with headquarters at Chicago.

Mr. Turner was born at Bluefield, W. Va., on January 27, 1913, and was graduated from Virginia Polytechnic Institute in 1935 with the degree of Bachelor of Science in civil engineering. He entered railroad service on April 23, 1936, as a rodman in the construction department of the Central region of the Pennsylvania, and on March 16, 1937, he became an engineer apprentice in the maintenance of way department at Buffalo, N. Y. On January 1, 1938, he was made an assistant on the engineering corps at Wooster, Ohio. On June 1, 1938, he joined the Pennsylvania Turnpike Commission as a party chief, and served in that capacity until February 1, 1939, when he returned to the Pennsylvania as an assistant on the engineering corps on the Eastern division at Alliance, Ohio. On November 16,

Norris V. Engman

1939, he was transferred to Niles, Ohio, and on June 1, 1940, he was transferred to Pittsburgh, Pa. Mr. Turner was appointed assistant supervisor at Lock Haven, Pa., on October 22, 1940, and served there until March 28, 1941, when he entered the armed forces, from which he was discharged with the rank of major. On December 1, 1945, he returned to the Pennsylvania as assistant supervisor at Freedom, Pa., where he remained until April 23, 1946, when he resigned to become associate editor of *Railway Age* and Railway Engineering and Maintenance.

Mr. Engman was born at Aberdeen, S. D., on June 1, 1911, and was graduated from the Rose Polytechnic Institute in 1933 with a Bachelor of Science degree in civil engineering. In 1934 he entered the service of the Chicago, Milwaukee, St. Paul & Pacific as a rodman in the engineering department at Chicago. From 1935 to 1943 he served successively as instrumentman, assistant roadmaster and assistant trainmaster at various locations. In June, 1943, he was appointed assistant engineer in the chief engineer's office at Chicago, serving in this capacity until January 5, 1948, when he joined the editorial staff of *Railway Age* and Railway Engineering and Maintenance.

Corliss A. Bercaw, whose recent promotion to Pacific Coast regional manager of the **Electro-Motive Division** of **General Motors Corporation** was announced in *Railway Age* of July 17, was born at Holgate, Ohio, and was graduated from California Institute of Technology as a mechanical engineer. After serving a year as a U. S. Navy aviator, he spent a year as a gradute student in railway engineering and sales with Westinghouse Electric Corporation. During 17 years with Westinghouse, he covered

Corliss A. Bercaw

engineering and sales assignments in Pittsburgh, Pa., Philadelphia, Chicago and Washington, D. C., three years of which were spent in negotiating foreign railroad electrification projects. Mr. Bercaw was with Baldwin Locomotive Works for three years as sales manager of Diesel locomotives. In 1943 he became general manager of the Springfield (Ohio) plant of Elliott & Co. and in 1945 joined Electro-Motive as district sales manager in the Chicago region, which position he held at the time of his recent promotion.

Edson K. Green, assistant sales manager of the **International Salt Company** since 1945, has been appointed general sales manager of the firm.

The Nelson Stud Welding division of the **Morton Gregory Corporation** has announced the establishment of a new customer engineering service department at its Lorain, Ohio, headquarters, under the direction of **Robert C. Singleton.**

Henry J. Zimmmerman, general traffic manager of the **B. F. Goodrich Company** since 1921, has been appointed assistant to the vice-president and assigned to special administrative duties. **Richard W. Corns** succeeds Mr. Zimmerman as general traffic manager.

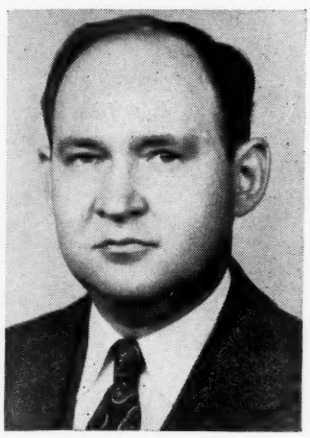
W. K. Sproule has been appointed superintendent of research of the **International Nickel Company of Canada,** at Copper Cliff, Ont., to succeed **Paul Queneau,**

whose appointment as metallurgical engineer was announced in *Railway Age* of July 24.

Franklin George, assistant advertising manager of the **General Railway Signal Company,** has been appointed sales engineer, reporting to the New York office.

Thor M. Olson, vice-president in charge of sales of the **Ex-Cell-O Corporation,** Detroit, Mich., has resigned.

Howard G. Pankratz, industrial engineer, has joined the sales-engineering-consultant staff of the industrial equipment division of the **R. C. Mahon Company.** Mr. Pankratz was graduated from the



Howard G. Pankratz

Massachusetts Institute of Technology and has had broad experience in the industrial engineering field. More recently, he has served as consulting engineer on industrial equipment matters.

Francis White, director of purchases of the **Budd Company,** has been placed in complete charge of all purchasing within the company, including the Hunting Park and Red Lion plants in Philadelphia, Pa., and the Charlevoix and Atwater plants in Detroit, Mich. **Carl Koelsch,** formerly in charge of steel purchases for the Detroit plants, has been transferred to Philadelphia and **Henry K. Arnold** has been appointed central material manager.

Charles F. Reade, formerly general sales manager of the Reade Manufacturing Company, has been advanced to vice-president of the firm, which has recently become the **Reade Manufacturing Company, Inc.**

OBITUARY

Frederick A. Stevenson, retired president of the American Car & Foundry Co., died suddenly on July 29, in Wilmington, Del. He was 68 years old.

D. G. Savage, vice-president and general sales manager of the Thew Shovel Company, died of a heart attack July 25. He was 50 years old.

FINANCIAL

Bessemer & Lake Erie.—*Annual Report.* Operating revenues of this company and its leased lines last year totaled $22,891,463. Operating expenses amounted to $13,150,818. Fixed charges were $1,497,032. Net income was $6,989,577. Current assets at the end of the year were $16,124,966. Current liabilities were $8,662,272. Funded debt was $16,043,000.

Central of New Jersey.—*Debt Adjustment.*—This road has asked the Interstate Commerce Commission to approve a voluntary plan of debt adjustment which it has filed pursuant to the provisions of the so-called Mahaffie Act. The plan, which has been approved by the road's board of directors (see *Railway Age* of June 26, page 136), provides for, among other things, a reduction from 5 per cent and 4 per cent to 3¼ per cent, effective January 1, 1949, in the interest rate of $48,731,000 of 100-year general mortgage bonds, due July 1, 1987. The road also proposes to reduce the par value of 274,368 shares of common stock from $100 per share to $50 per share and to issue an additional 274,368 shares, $50 per share, which would go to the general mortgage bondholders as consideration for the interest reduction on the outstanding bonds. The new common stock would be known as Class A and the old as Class B. The road told the commission that the plan would result in annual interest savings of approximately $802,900.

Lackawanna & Wyoming Valley.—*Debt Adjustment.*—This road has asked the Interstate Commerce Commission to approve a voluntary debt adjustment plan which it has filed pursuant to the so-called Mahaffie Act. Among other things, the applicant proposes to extend from August 1, 1951, to August 1, 1996, the maturity date on $1,995,000 of 5 per cent first mortgage gold bonds, and to extend from February 1 to February 1, 1993, the maturity date on $995,500 of 20-year 6 per cent gold debenture bonds. It also seeks authority to reduce the fixed interest on the first mortgage gold bonds to 2 per cent, with an additional 3 per cent to be contingent on earnings; to modify its first mortgage so as to permit the issuance of equipment securities ahead of the mortgage; and to redeem the first mortgage bonds at par instead of 105.

Chesapeake & Ohio.—*Pere Marquette Merger.* — The Interstate Commerce Commission has reopened for reconsideration the proceeding pertaining to the merger of the Pere Marquette into the C.&O. As noted in *Railway Age* of May 15, page 204, the Supreme Court of the United States sent the proceedings back to the commission for additional findings upon the claims of dissenting P. M. preferred stockholders. The court's opinion does not require the commission to accord the dissenters more favorable treatment than the assenting P.M. preferred stockholders received under the plan, but holds in effect that commission approval of a merger as "just and reasonable" and "consistent with the public interest" is inconsistent if there are left untied any loose ends in the nature of potential capital liabilities against the merged property.

Texas & Pacific.—*Annual Report.*—Operating revenues of this road last year were $64,704,829, compared with $55,90,067 in 1946. Operating expenses were $48,742,474, compared with $42,441,477. Fixed charges were $3,134,447, compared with $2,811,806. Net income totaled $5,460,081, compared with $5,435,135. Current assets at the end of the year amounted to $27,837,135, compared with $28,114,179. Current liabilities were $11,241,086, compared with $10,827,765. Long term debt was $64,528,245, compared with $64,084,114.

New Securities

Applications have been filed with the Interstate Commerce Commission by:

St. Louis-San Francisco.—To assume liability for $5,550,000 of series B equipment trust certificates, the proceeds of which will be applied toward the purchase of the following equipment:

	Description and Builder	Estimated Unit Cost
3	6,000-hp. Diesel-electric freight locomotives (Electro-Motive Division, General Motors Corporation)	$569,698
5	1,000-hp. Diesel-electric switching locomotives (Fairbanks, Morse & Co.)	94,902
3	1,000-hp. Diesel-electric switching locomotives (American Locomotive Company)	94,937
10	4,500-hp. Diesel-electric freight locomotives (American Locomotive Company)	434,680
3.	1,000 hp. Diesel-electric switching locomotives (Baldwin Locomotive Works)	94,850
50	70-ton all-steel gondola cars (Pressed Steel Car Company)	6,065

The certificates, to be dated August 15, would be sold on the basis of competitive bidding and would mature in 15 annual installments of $370,000, starting August 15, 1949.

Goldsboro, N. C., Union Station. — To extend from August 1 to August 1, 1963, the maturity date of not exceeding $96,000 of first mortgage bonds and to reduce the interest rate on such bonds from 4½ per cent annually to 3 per cent. The bonds are owned jointly by the Southern and Atlantic Coast Line, both of which have consented to the extension.

Pennsylvania.—To assume liability for $841,000 of 3 per cent general mortgage bonds, which its lessor, the United New Jersey Railroad & Canal, seeks commission authority to issue and deliver to it. The bonds would be dated September 1 and mature March 1. The proposed issue would be used to reimburse the Pennsylvania for the payment of a like principal amount of general mortgage 4 per cent bonds, due September 1.

Division 4 of the I.C.C. has **authorized:**

Pennsylvania. — To assume liability for the payment of $14,518,000 of first

mortgage series A bonds, which its lessor, the New York Bay, has been authorized to issue and deliver to it at par. The bonds will be applied toward the cancellation of $11,706,000 of series A 5 per cent first mortgage gold bonds, due May 1, 1982, and toward reimbursing the Pennsylvania for $2,812,000 in advances which the latter has made to its lessor. The bonds will be dated August 1, will bear interest at 3¾ per cent yearly, and will mature on August 1, 1978. They will be redeemable at 105 if redeemed before February 1, 1957, decreasing gradually thereafter to February 1, 1976, after which date they will be redeemable at their principal amount. For sinking fund purposes, they will be redeemable at 102½ on any August 1 between 1949 and 1956, inclusive, decreasing thereafter to August 1, 1976, after which date they will be redeemable at their principal amount. Accrued interest will apply in all cases.

New York Central-Baltimore & Ohio.—To assume joint liability for $9,250,000 of series A first mortgage sinking fund bonds, to be issued and sold by the Lakefront Dock & Railroad Terminal Co. Proceeds will be used to reimburse the guarantors for advances in connection with the construction of facilities near Toledo, O., at a cost of not less than $18,500,000. At the same time, the commission authorized Lakefront to issue and deliver to the N.Y.C. and B. & O. $9,240,000 of capital stock, consisting of 92,400 shares of the par value of $100 a share. The bonds will be dated June 1, and will mature on June 1, 1968. The report also approves a selling price of 98.71 with a 3⅞ per cent interest rate, the bid of R. W. Pressprich & Co., on which basis the average annual cost will be approximately 3.97 per cent. They will be redeemable at 102⅝ if redeemed on or before June 1, 1950, decreasing gradually thereafter to 100¼ if redeemed on or before June 1, 1967, and thereafter to maturity at par. For sinking fund purposes, they will be redeemable at 101⅜ if redeemed on or before June 1, 1950, decreasing gradually thereafter to 100⅛ if redeemed on or before June 1, 1967, and thereafter to maturity at par.

Dividends Declared

Cleveland & Pittsburgh. — 4% special guaranteed, 50¢, quarterly; 7% regular guaranteed stock, 87½¢, quarterly, both payable September 1 to holders of record August 10.

Delaware & Hudson. — $1.00, quarterly, payable September 20 to holders of record August 27.

Illinois Central. — 6% non-cum pfd., $3.00, payable September 1 to holders of record August 11.

Nashville, Chattanooga & St. Louis. — $1.00, payable September 1 to holders of record August 9.

Reading. — 4% non-cum. 1st pfd., 50¢ quarterly, payable September 9 to holders of record August 19.

Southern. — 75¢, quarterly, payable September 15 to holders of record August 13.

Average Prices Stocks and Bonds

	August 3	Last week	Last year
Average price of 20 representative railway stocks	48.63	49.34	49.26
Average price of 20 representative railway bonds	90.46	90.87	90.04

RAILWAY OFFICERS

EXECUTIVE

J. W Corbett, whose promotion to vice-president in charge of operations of the Southern Pacific at San Francisco, Cal., was announced in *Railway Age* of July 24, was born at Gallup, N. M. on June 25, 1895, He began his railroad career with the Union Pacific in Oregon in 1911, coming to the Southern Pacific four years later as a telegrapher at Portland. Mr. Corbett served in the army during World War I, and returned to the Southern Pacific

J. W. Corbett

as train dispatcher on the Sacramento d vision, where he later served as division examiner. In 1928 he was appointed trainmaster and served in that capacity on several divisions until made assistant superintendent of the Portland div'sion in 1937. Mr. Corbett became assistant to general manager in 1939, with head quarters at San Francisco, and returned to Portland as superintendent in 1941. He was named assistant general manager, the position he held at the time of his recent appointment, in 1944.

Edwin A. Bromley, general purchasing agent of the Canadian National, has been appointed vice-president in charge of purchases and stores, with headquarters as before at Montreal, Que., succeeding **D. McK. Ford,** who has retired under the pension rules of the company. Mr. Bromley was born at Toronto, Ont., on February 11, 1901, and joined the Canadian National in October, 1918, as a junior clerk in the president's office at Toronto, and became a stenographer in the purchasing and stores department two years later. After serving as stenographer and secretary to the director of the department, Mr. Bromley was appointed office assistant to the vice-president of purchases and stores of the system in 1929. On February 1, 1930, he was promoted to general stationery agent, becoming assistant to the vice-president, purchases, stores and steamships, in February, 1937. Mr. Bromley was appointed general purchasing agent in August, 1941.

Mr. Ford was born in Glasgow, Scotland, and first entered railway service with the North British railway in 1900 as a clerk in the general goods manager's office. Three years later he became associated with the Caledonian

Edwin A. Bromley

railway as a clerk in the district superintendent's office. In April, 1905, he came to Canada and entered the service of the Canadian Northern (now Canadian National) at Toronto, Ont., as a clerk, leaving in July of the same year to become chief clerk in the operating and accounting department of the Halifax & Yarmouth (now C.N.R.) at Yarmouth, N. S. In December, 1905, he went to the Halifax & South Western (now C.N.R.) as chief clerk in the auditing and accounting department

D. McK. Ford

at Bridgewater, N. S. In July, 1910, he transferred to the Canadian Northern Express Company as an auditor and cashier at Quebec and in February, 1916, was appointed auditor, Quebec lines of the Canadian Northern. Mr. Ford was appointed accountant, eastern lands department of the Canadian National in September, 1916, and in November, 1918, became chief clerk in the president's

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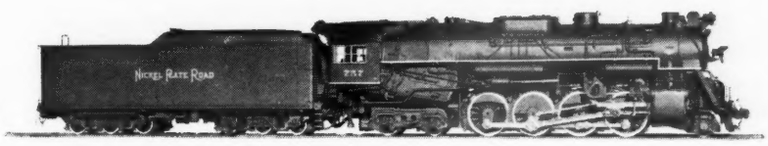
10 MORE

for the Nickel Plate



We have recently received an order for ten 2-8-4's from the New York, Chicago & St. Louis Railroad Co.

These locomotives will be similar to the 55 modern Lima's already in service on that road. They will carry a working boiler pressure of 245 lb., will have 69-inch drivers, and will develop 64,100 lb. initial tractive effort.

Modern steam locomotives like these will show a good return on their investment—and, with planned scheduling, can deliver more ton-miles of freight per dollar of investment than any other type of motive power.

LIMA HAMILTON CORPORATION

DIVISIONS: *Lima, Ohio* — Lima Locomotive Works Division; Lima Shovel and Crane Division. *Hamilton, Ohio* — Hooven, Owens, Rentschler Co.; Niles Tool Works Co.

PRINCIPAL PRODUCTS: Locomotives; Cranes and shovels; Niles heavy machine tools; Hamilton diesel and steam engines; Hamilton heavy metal stamping presses; Hamilton-Kruse automatic can-making machinery; Special heavy machinery; Heavy iron castings; Weldments.

office of the Canadian National and Canadian government merchant marine, which position he held until 1922, when he was appointed office assistant to the president. Upon the formation of the present Canadian National in 1923, Mr. Ford was appointed assistant to the director of purchases and supplies and in 1924 he was appointed assistant to vice-president of purchases and stores, becoming general purchasing agent in February, 1937, and vice-president in charge of purchases and stores in August, 1941.

C. H. Longman has been elected vice-president in charge of operation of the Chicago & North Western, at Chicago, succeeding **L. L. White,** whose resignation, effective August 1, was reported in *Railway Age* of July 24, page 116. Mr. Longman was born in Chicago in 1893. He entered railroad service in 1907 as a yard chief of the North Western, and served successively as locomotive fire-

C. H. Longman

man, locomotive engineer, road foreman of engines, supervisor of safety and trainmaster. In 1934 he was promoted to assistant to general manager, three years later being promoted to assistant general manager. He was appointed assistant to the chief operating officer in 1940, and in 1946 to general manager, which position he held at the time of his recent promotion.

R. L. Pearson, vice-president, executive department, of the New York, New Haven & Hartford, with headquarters at New Haven, Conn., has retired because of ill health, after serving the New Haven for more than 44 years.

J. E. Goodwin has been elected vice-president and executive assistant to the president of the Chicago & North Western, at Chicago, a newly created position. Mr. Goodwin was born at Topeka, Kan., in 1902, and graduated from Lake Forest College and the University of Chicago. He entered railroad service as a machinist apprentice on the Atchison, Topeka & Santa Fe in 1918, serving there until 1922 while attending school during the winter months. After leaving college, Mr. Goodwin went with the Missouri Pacific as machinist, becoming enginehouse foreman in 1927. In 1929 he was promoted to erecting foreman and in 1932 to schedule supervisor. A year later he was appointed production engineer. In 1935 he was made general foreman, and in 1939 he

J. E. Goodwin

was promoted to acting shop superintendent, leaving that position in 1941 to become master mechanic of the International-Great Northern. The following year he returned to the Missouri Pacific as mechanical superintendent. In 1943 he went to the North Western as assistant chief mechanical officer and two years later was promoted to chief mechanical officer, from which position his recent promotion was effected.

FINANCIAL, LEGAL and ACCOUNTING

Edward M. Hudgins has been appointed general claim agent, Chesapeake district of the Chesapeake & Ohio, with headquarters at Richmond, Va.

The Western Pacific has announced the following appointments: **Howard T. Bryant,** special accountant, **William H. Stout,** general clerk, and **Clifford E. Warner,** assistant auditor of miscellaneous accounts, have been appointed assistants to the general auditor, at San Francisco, Cal. **Frank P. Ferguson,** head capital expenditures and valuation clerk, has been appointed auditor of capital expenditures, and **Joseph B. Corven,** traveling accountant, has been promoted to assistant auditor of disbursements, with headquarters at San Francisco.

Matt Phelps, assistant to the comptroller of the Erie at Cleveland, Ohio, has retired after 51 years of service. Mr. Phelps was born in Jersey City, N. J. Beginning his employment with the Erie in a clerical capacity, he subsequently served in the comptroller's office as bookkeeper, chief clerk and special accountant. From 1921 to 1931 he was financial accountant in the legal and financial department, returning to the comptroller's office in 1931 as general accountant. Mr. Phelps had been assistant to comptroller since 1936.

R. J. Tiffany, whose appointment as assistant general freight claim agent of the New York Central system at Buffalo, N. Y., was reported in *Railway Age* of June 12, was born at Buffalo in 1901 and entered the service of the New York Central there in 1917 in the freight claim department. He became special agent at Syracuse, N. Y., in 1937 and in 1942 became traveling

R. J. Tiffany

freight claim agent at Boston, Mass., and last January 1 he was promoted to assistant freight claim agent at Buffalo, which position he held until his recent appointment as assistant general freight claim agent.

Clarence D. Dawson, assistant superintendent of insurance of the Baltimore & Ohio, has been promoted to superintendent of the insurance department,

Clarence D. Dawson

with headquarters as before at Baltimore, Md., succeeding **Richard R. Hackett,** who retired on August 1. Mr. Dawson entered the service of the Baltimore

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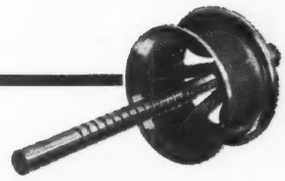
Rising Fuel Costs Can be Offset...



with the FRANKLIN SYSTEM OF DISTRIBUTION

With recently increased cost of locomotive fuels playing such an important part in the great rise in train operation costs, it is especially important at this time to study the fuel-saving possibilities of the Franklin System of Steam Distribution.

Application of this system to your existing or new locomotives *will* offset rising fuel costs.

The Franklin System of Steam Distribution, using poppet valves in place of piston valves, increases the efficiency of transforming steam into horsepower-hours. At normal operating speeds, for either freight or passenger locomotives, the increase in horsepower output will be 19% to 30% for the same steam consumption. For the same power output, fuel savings will be even more pronounced, have reached 45% with maximum evaporation. In normal road service, at less than maximum performance, fuel savings will average from 15% to 25% depending on operating conditions.

We would like to show you how this can be done on your locomotives — either existing or new — for either freight or passenger service.

FRANKLIN RAILWAY SUPPLY COMPANY

A CORPORATION

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEARS
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTION

& Ohio in 1923 as a stenographer-clerk in the division engineer's office. The following year he transferred to the insurance department in the same capacity, becoming an insurance inspector in 1941, and assistant superintendent of insurance in 1946.

Mr. Hackett was born on August 1, 1879, and has been with the Baltimore & Ohio since 1900. Starting as carpenter in the maintenance of way department in Baltimore, he was transferred to the insurance department as an inspector in 1912. He became chief insurance inspector in 1918, and was promoted to superintendent of insurance in 1931.

Y. D. Ward, general claim agent of the St. Louis Southwestern's Northern division, at Pine Bluff, Ark., has been appointed general claim agent of the road, with headquarters at Tyler, Tex., succeeding **Ben F. Yowell,** who has retired after 67 years of service with the Cotton Belt.

Fred L. Johnson, assistant general claim agent of the Gulf, Mobile & Ohio at Chicago, has been advanced to general claim agent, with headquarters at Mobile, Ala., succeeding **Parks C. Archer,** who has retired after nearly 40 years of service. Mr. Johnson is succeeded by **L E. Grove,** claim agent at Bloomington, Ill.

OPERATING

R. E. Hallawell, whose promotion to general manager of the Pacific Lines of the Southern Pacific at San Francisco, Cal., was reported in *Railway Age* of July 24, was born at San Francisco on January 8, 1891. Mr. Hallawell attended the University of California at Berkeley, and entered railroad service as a clerk on the Southern Pacific's Coast division in 1914, advancing to assistant trainmaster in 1920. Later that same year he was named supervisor of transportation of the Northern district.

R. E. Hallawell

Beginning in 1925 he was, successively, transportation inspector, chief clerk in the general manager's office, and manager of the former Interurban Electric. In 1940 he became assistant superintendent of the Sacramento division, and in 1942 went to the Los Angeles division in the same capacity. Later that same year, Mr. Hallawell returned to San Francisco as general superintendent of transportation. He was made assistant general manager in 1944, which position he held at the time of his promotion on July 15.

L. B. Kendall, assistant to vice-president in charge of operation of the Chicago & North Western, at Chicago, has been advanced to general manager of the C. & N. W. system at that point. **J. J. Stein,** assistant general manager, has been appointed general superintendent, Eastern district, with headquarters remaining in Chicago. **W. L. Mueller,** general manager, Western district, has been appointed general superintendent, Western district, with headquarters remaining at Omaha, Neb.

In connection with the Texas & Pacific's new three-division plan of operation, as outlined in *Railway Age* of July 31, page 48, the following appointments have been made: **R. C. Parker,** general superintendent at Dallas, Tex., appointed assistant vice-president — operations and **W. T. Long, Jr.,** superintendent of transportation, also at Dallas, advanced to general superintendent of transportation. The following assignments are to become effective on August 15: **T. E. Griswold,** assistant superintendent at Fort Worth, Tex., appointed superintendent of the Eastern division at that point; **W. T. Alexander,** assistant chief engineer at Dallas, appointed superintendent of the Western division at Big Spring, Tex.; and **George French,** assistant superintendent at Big Spring, advanced to superintendent of the newly-created Louisiana division at Alexandria, La. Other changes effective on August 15 are: **W. C. Foster,** trainmaster at Marshall, Tex., advanced to assistant superintendent at Fort Worth; **T. E. Albright,** road foreman of engines at Mineola, Tex., appointed to succeed Mr. Foster; **J. G. Tucker,** assistant superintendent at Alexandria, transferred to Big Spring; and **J. G. Brannon** and **Doss Handy,** division superintendents at Fort Worth, assigned other duties.

TRAFFIC

Forrest F. Lipe, district traffic agent of the Illinois Central, with headquarters at Clarksdale, Miss., has been transferred to Jackson, Tenn., succeeding **James O. Vance,** who has resigned. Mr. Lipe is succeeded by **Howard D. Winstead,** traveling freight agent at Little Rock, Ark.

John R. Mulroy, whose promotion to coal traffic manager of the Chicago, Indianapolis & Louisville, at Chicago, was reported in *Railway Age* of July 17, was born at Chicago on November 10, 1901, and received his higher education at DePaul University, Chicago. He entered railroad service in November, 1946, as assistant general freight agent of the Monon at Chicago. In August, 1947, he was appointed general freight agent, the post he held at the time of his recent promotion. Mr. Mulroy was formerly owner and operator of the Mulroy Coal Company.

Edward J. Cottom, whose promotion to freight traffic manager — rates and charges, of the Louisville & Nashville, with headquarters at Louisville, Ky., was reported in *Railway Age* of July 3, was born on July 23, 1889, at Louisville, and entered L. & N. service in that city in 1906 as a claim investigator.

Edward J. Cottom

In 1910 he was assigned to the general freight office, where he held various positions until March 1, 1928, when he was promoted to chief clerk. Mr. Cottom was promoted to assistant general freight agent in 1935 and to general freight agent in October, 1945. He was serving in the latter position at the time of his recent advancement.

G. C. Hay has been appointed agent of the Chicago Great Western, with headquarters at Cleveland, Ohio, succeeding **S. D. Beir,** who has retired after a railroad career of 52 years.

Wallace D. O'Brien, assistant traffic manager — rates and divisions, of the Great Northern, with headquarters at St. Paul, Minn., has been promoted to freight traffic manager — rates and divisions at that point. **Vincent P. Brown,** general freight agent at St. Paul, has been appointed assistant freight traffic manager — rates and divisions, with the same headquarters.

Charles E. Ragland, whose promotion to eastern traffic manager in charge of Eastern region, of the Chicago, Indianapolis & Louisville, with headquarters at New York, was reported in *Railway Age* of July 17, was born on July 29, 1913, at Pell City, Ala. Mr. Ragland received his higher education at Birmingham Southern College and at a business college in Birmingham,

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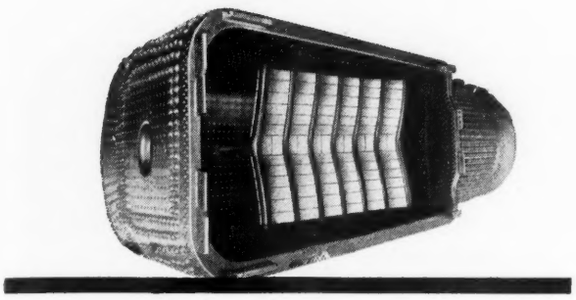

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Ala., and entered the service of the Monon in 1935 as chief clerk in the latter city. He advanced to traveling freight agent in 1941 and to assistant district manager in January, 1945. Prior

Charles E. Ragland

to his recent promotion, Mr. Ragland had been since November, 1945 eastern traffic manager in charge of the road's New York office.

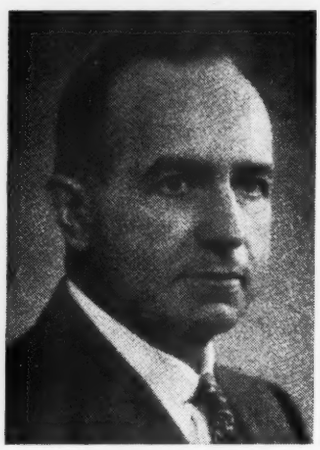
MECHANICAL

F. J. Kossuth, superintendent car shops of the New York Central at East Buffalo, N. Y., has been appointed assistant superintendent of equipment, with headquarters at New York, succeeding **C. N. Kittle,** whose death on June 15 was reported in *Railway Age* of July 3, page 44. **J. J. Larson** has been appointed division general car foreman at Buffalo, N. Y., succeeding **A. A. Johnson,** transferred.

R. G. Norton, road foreman of engines, Norfolk terminal, of the Norfolk & Western, has been appointed supervisor of smoke abatement, a new position on the N. & W., created as part of its campaign to reduce excessive smoke, in which the railway is cooperating with other carriers in projects of Bituminous Coal Research, Inc. Mr. Norton will be attached to the staff of the vice-president and general manager and will work directly with supervisors and engine crews all over the line. He will maintain headquarters at Roanoke, Va.

George W. Bohannon, assistant general mechanical officer at the Chicago & North Western, at Chicago, has been promoted to chief mechanical officer at that point, succeeding **J. E. Goodwin,** who has been elected vice-president and executive assistant to the president. **J. C. Stump,** superintendent of motive power, Northern district, at Chicago, has been appointed assistant chief mechanical officer and **W. W. Matzke,** assistant to vice-president in charge of mechanical matters, has been appointed assistant to chief mechanical officer. **E. J. Crawford,** formerly superintendent of motive power, Western district, who of late has been engaged in other duties due to ill health, has been appointed superintendent of motive power, Northern district.

Frederick J. Herter, whose appointment as engineer of car construction of the Advisory Mechanical Committee of the Chesapeake & Ohio at Cleveland, Ohio, was reported in *Railway Age* of July 17, was born at New Bergen, Pa., on June 2, 1890, and was graduated from Tri-State College, Angola, Ind. Mr. Herter entered railroad service in 1912 as a car repairman for the Pennsylvania and subsequently worked for the New York, Chicago & St. Louis as a draftsman, chief draftsman and engineer of rolling stock. In 1929, when the Advisory Mechanical Committee was organized, Mr. Herter was named assistant engineer of car construction for the C. & O., Nickel Plate, Erie and Pere Marquette at Cleveland. He was transferred in 1933 to the staff of the vice-president of the C. & O. in connec-



Frederick J. Herter

tion with car work and three years later was named mechanical assistant (cars) to chief mechanical officer for the C. & O., Nickel Plate and Pere Marquette. He was appointed mechanical engineer of the Pere Marquette at Grand Rapids, Mich., in February, 1943, transferring to Cleveland last February.

Russell W. Seniff, engineer of tests of the Alton at Chicago, has been appointed engineer of tests of the Baltimore & Ohio at Baltimore, Md., succeeding **Walter R. Hedeman,** who retired on August 1, after 45 years of service with the B. & O.

D. L. Ringler, master mechanic of the Texas & Pacific, with headquarters at Marshall, Tex., will be transferred to Big Spring, Tex., on August 15. **J. H. Webb,** now apprentice instructor, will be advanced to assistant master mechanic at Marshall on that date.

J. C. Parker, whose appointment as superintendent car department of the Atlantic Coast Line, with headquarters at Wilmington, N. C., was announced in *Railway Age* of July 17, was born at Headland, Ala., on July 4, 1914. He entered railroad service on March 25, 1935, as an apprentice with the Atlantic Coast Line, completing his apprenticeship in July, 1939, after which he continued with the Coast Line as coach

J. C. Parker

mechanic at Waycross, Ga. He subsequently served as gang foreman and later as assistant foreman car department at Waycross, being transferred to Rocky Mount, N. C., in the latter capacity in June, 1943. Mr. Parker had been assistant superintendent car department at Wilmington at the time of his current promotion, having attained that position on March 24, 1947.

PURCHASES and STORES

George L. Mitchell, purchasing agent of the Atlantic Coast Line, has been appointed to the newly created position of general purchasing agent, with headquarters as before at Wilmington, N. C. **J. U. King** and **L. C. Walsh,** both former assistant purchasing agents, have been appointed assistant general purchasing agents, with headquarters at Wilmington. Mr. Mitchell, a native of Wilmington, entered Coast Line service in June, 1904, as a messenger boy in the Wilmington general offices. He subsequently held positions as office assistant to federal manager, office assistant to executive vice-president, assistant to executive vice-president, and assistant purchasing agent, which latter post he has maintained since April 1, 1946. Mr. King, also a native of Wilmington who started working for the A.C.L. as a messenger in the Wilmington general offices, has been with this road since June, 1900. He has held positions of chief clerk, assistant general storekeeper and, since April 1, 1946, general storekeeper. Mr. Walsh was born in Florence, S. C., and entered A.C.L. employment as as stenographer in the Wilmington general offices in August, 1917. He had been assistant purchasing agent since April 1, 1946.

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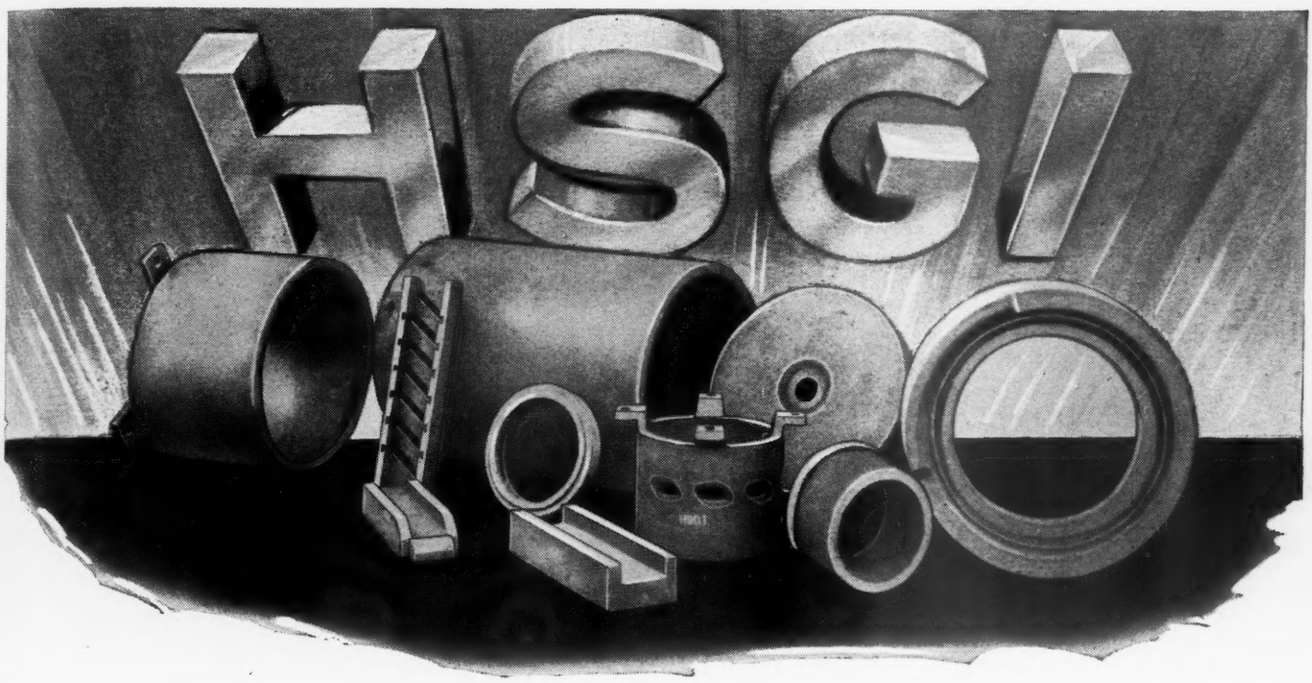

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Allan L. Prentice, whose appointment as manager, purchases and stores, of New York Central System, with headquarters at New York, was announced in *Railway Age* of July 24, was born on April 9, 1893, at Painesville, Ohio. Mr. Prentice's railroad career has been spent in the service of the New York Central. He entered its service in February, 1914, as timekeeper, maintenance of way department, Erie division, and was subsequently employed in the same department as extra gang foreman; general foreman, Lansing division; assistant supervisor of track, Erie division; assistant engineer, maintenance

Allan L. Prentice

of way, at Cleveland, Ohio. In September, 1919, he transferred to the purchases and stores department as assistant general storekeeper, Lines West, at Collinwood, Ohio. He served as supervisor, scrap and reclamation, at Cleveland from July, 1923, to November, 1931, when he became manager, scrap and reclamation, serving in that capacity until December, 1944, when he was appointed manager, stores and reclamation, at Ashtabula, Ohio. At the time of his current promotion, Mr. Prentice had been employed as general purchasing agent, having attained that position in September, 1946.

ENGINEERING and SIGNALING

R. A. de Villers, assistant engineer in the district engineer's office of the Canadian National, at Quebec, Que., has been appointed assistant district engineer, with the same headquarters, succeeding **S. J. H. Wallers,** who has retired on pension after many years of service.

D. W. Blair, assistant engineer of the Levis division of the Canadian National, has been promoted to division engineer of the Laurentian division at Quebec, Que., succeeding **J. G. A. Sawyer,** transferred.

W. J. Savage, assistant engineer of the Missouri Pacific, at St. Louis, Mo., will become assistant chief engineer of the Texas & Pacific, at Dallas, Tex., on August 15, succeeding **W. T. Alexander,** who will become division superintendent of the T. & P. at Big Spring, Tex.

J. S. Hestle, assistant division engineer of the Louisville & Nashville, Pensacola, Fla., retired on July 31 after 46 years of service. **Claude Johnston** has been appointed assistant division engineer to fill the position vacated by Mr. Hestle, but with headquarters at Mobile, Ala.

SPECIAL

E. P. Miller, chief clerk of the Car Service Division of the Association of American Railroads, has been appointed district manager at Boston, Mass., succeeding **L. M. Ross,** who will retire on August 15, after 47 years of railroad service. Mr. Ross was born in Rowe, Mass., in 1882, and began his railroad career as a yard clerk on the Fitchburg (now part of the B. & M.), later serving on the Boston & Maine as bill clerk, cashier, chief clerk, agent and traveling freight agent. From May, 1918, to February, 1919, he was with the Car Service section of the U. S. Railroad Administration, returning to the B. & M. at the end of that period in charge of mail traffic. He was traveling freight agent of the Dollar Steamship Line from April, 1924, to May, 1925, when he joined the A.A.R. as car service agent at Boston, and in addition became field secretary of the New England Shippers Advisory Board. Mr. Ross has been district manager of the Car Service division at Boston since 1935.

Mr. Miller was born in Hume, Ohio, in 1914. He entered railroad service at the age of 14 with the Lake Erie & Western (now part of the Nickel Plate), remaining with this road for six years during which time he was employed in clerical positions in the yard office and in the superintendent's office. He went with the Detroit, Toledo & Ironton in 1924, where he was subsequently advanced to assistant to the superintendent of transportation, handling car distribution and general transportation matters. Mr. Miller joined the staff of the A.A.R. Car Service Division during World War II, and was named assistant to the manager of the newly formed Tank Car section, which supervised the emergency movement of oil to New England and other Atlantic Seaboard territory. Following the war, he was appointed assistant to the manager of the A.A.R. Box Car section, and on May 1, 1948, was promoted to chief clerk, Car Service division, the position he was maintaining at the time of his recent promotion.

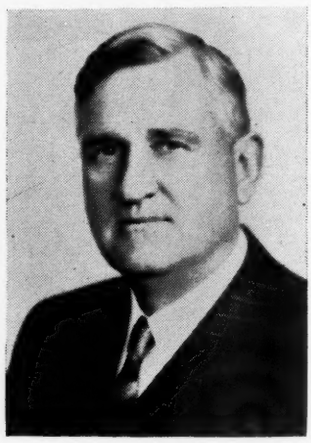
OBITUARY

William H. Guild, vice-president of the Union Pacific, with headquarters at Omaha, Neb., died in a Denver (Colo.) hospital on July 29, following a stroke suffered a few hours earlier in the company's office there. He was 64 years old.

W. F. Zane, chief signal engineer of the Burlington Lines, at Chicago, died suddenly in that city on August 3.

Harold T. Livingston, chief engineer, maintenance of way and structures of the Chicago, Rock Island & Pacific, with headquarters at Chicago, died at St. Luke's hospital in that city on July 31, following a brief illness. A photograph of Mr. Livingston and a sketch of his career appeared in *Railway Age* of March 27, in connection with his promotion to chief engineer, maintenance of way and structures.

Leslie Bennett McDonald, vice-president in charge of operations of the Southern Pacific Lines at San Francisco, Cal., died on July 5, as reported in *Railway* Age of July 10. Mr. McDonald was born at Wylie, Tex., on August 26, 1883, and entered railway service as a stenographer-clerk with the New York, Texas & Mexican, and the Gulf, Western Texas & Pacific at Victoria, Tex., in May, 1902. In 1906, he became chief clerk to the division engineer and to the superintendent of the Victoria division, Gulf, Houston & San Antonio, at Victoria, where he later advanced to assistant superintendent. In 1909 he became assistant superintendent of the Houston terminals, Southern Pacific Lines, and in 1912 he was made super-



Leslie Bennett McDonald

intendent at the same point. In 1918, Mr. McDonald went as superintendent to El Paso, and later in the same year was appointed superintendent at San Antonio. In 1925, he was promoted to assistant general manager of the Texas lines at Houston, and in 1930, to general manager. In 1937 he was appointed vice-president and general manager of the Texas & Louisiana lines at Houston, and a year later went to San Francisco as general manager of the Pacific lines. In April, 1942, Mr. McDonald was promoted to vice-president in charge of operations, which position he held at the time of his death.

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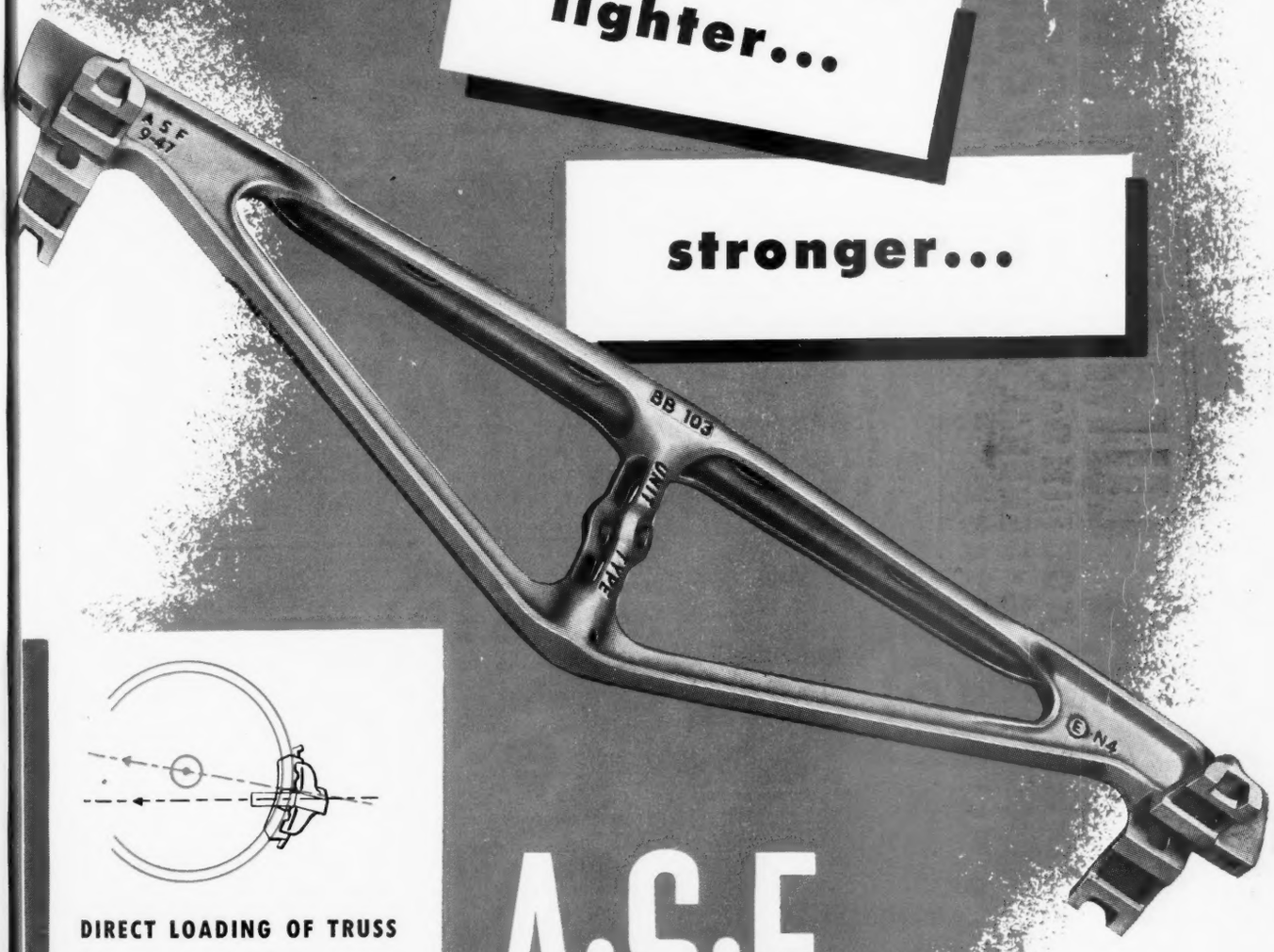

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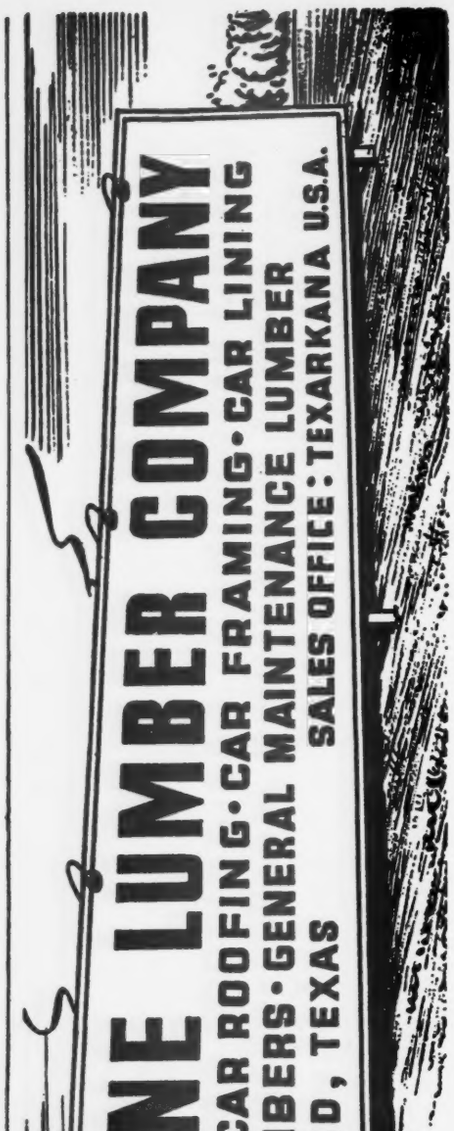
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GENERAL NEWS

Waybill Data

The Bureau of Transport Economics and Statistics of the Interstate Commerce Commission has issued a table showing on a one-per-cent-sample basis, the average short-line length of haul per car and the percentage distribution of cars according to designated mileage blocks, as represented by the carload terminations reported by Class I railroads for the third quarter of 1947. The compilation, Statement No. 4822, is one of the bureau's so-called waybill studies.

Like others in the series it employs data taken from waybills submitted in response to the commission's September 6, 1946, order requiring Class I roads to file all audited waybills representing their carload terminations which are numbered "1" or with digits ending with "01."

Railroads Get Until January 30 To Reply to New Mail Proposal

The Interstate Commerce Commission has given the railroads until January 30, 1949, to formally reply to the "comprehensive plan for the transportation of mail" which has been filed with the commission by Postmaster General Donaldson as part of his presentation in the railway mail May proceeding—No. 9200. Among the important features of the plan, which was outlined in *Railway Age* of July 17, page 50, are those which would modify arrangements for so-called storage space service, i.e., the transportation and handling of made-up mails in bulk. The railroads' objections to the plan were reported in *Railway Age* of July 31, page 48.

The commission said it would set a hearing date on the plan at such times and places as it may hereafter direct. In another order in the same proceeding, wherein the carriers are seeking authority to effect a permanent increase of 65 per cent in the rates for handling mail, the commission held that enlargement of the case so as to include therein an investigation to attain information with respect to services rendered in the transportation of express matter would "unduly broaden" the issues. Such an investigation was sought in a petition filed by the postmaster general.

The postmaster general also had requested the commission to report to him the revenue received by the railroads from express companies for services rendered in the transportation of express matter. The commission, however, noted that such information has heretofore been furnished the petitioner pursuant to a previous request made by him and that like information will be furnished from time to time as he may further request.

Meetings & Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetingss

AIR BRAKE ASSOCIATION—Lawrence Wilcox, Room 827, 80 E. Jackson Blvd., Chicago 4, Ill. Next meeting, September 20-22, 1948, Hotel Sherman, Chicago, Ill.

ALLIED RAILWAY SUPPLY ASSOCIATION.—C. F. Weil, American Brake Shoe Company, 6th floor, 109 N. Wabash Ave., Chicago 2, Ill.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—E. P. Soebbing, 1450 Railway Exchange Bldg., St. Louis 1, Mo. Next meeting. October 25-27, 1984, The Cavalier Hotel, Virginia Beach, Va.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C. R. R. of N. J., 143 Liberty St. New York 6, N. Y. Annual meeting, September 14-16, 1948, Stanley Hotel, Estes Park, Colo.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise LaChance, Room 901, 431, S. Dearborn St., Chicago 5, Ill.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elsie LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 20-22, 1948, Hotel Stevens, Chicago, Ill.

AMERICAN RAILWAY CAR INSTITUTE. — W. C. Tabbert, 19 Rector St., New York 6, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—L. P. East, Pennsylvania Railroad, Richmond, Ind. Annual Meeting, April, 1949, Old Point Comfort, Va.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 15-17, 1949, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—Harry Walker, D. & R. G. W. R. R., Room 204, Rio Grande Bldg., Denver, Colo. Annual meeting, October 17-19, 1948, Pinehurst, N. C.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—C. E. Huntley, Tower Bldg., Washington 5, D. C. Annual meeting October 13-14, 1948, Hotel Morrison, Chicago, Ill.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, Asst. Secretary, 1916 Race St., Philadelphia 3, Pa.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18, N. Y. Annual meeting, November 28-December 3, 1948, New York, N. Y.

Railroad Division.—E. L. Woodward, Railway Mechanical Engineer, 105 W. Adams St., Chicago 3, Ill.

AMERICAN WOOD-PRESERVERS' ASSOCIATION. —H. L. Dawson, 1427 Eye St., N. W., Washington 5, D. C. Annual meeting April 26-28 1949, St. Louis, Mo.

ASSOCIATED TRAFFIC CLUBS OF AMERICA, INC.—R. A. Ellison, Cincinnati Chamber of Commerce, 1203 C. of C. Bldg., Cincinnati 2, O. Annual meeting, October 18-20, 1948, Hotel Netherland Plaza, Cincinnati, O.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—W. F. Ziervogel, 605 S. Ranken Ave., St. Louis 3, Mo. Annual meeting, October 5-7, 1948, Windsor Hotel, Montreal, Quebec, Canada.

ASSOCIATION OF AMERICAN RAILROADS. — George M. Campbell, Transportation Bldg., Washington 6, D. C.

Operations and Maintenance Department—J. H. Aydelott, Vice-President, Transportation Bldg., Washington 6, D. C.

Operating-Transportation Division.—L. R. Knott, 59 E. Van Buren St., Chicago 5, Ill.

Operating Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5, Ill.

Communications Section.—W. A. Fairbanks, 30 Vesey St., New York, 7, N. Y. Annual meeting, September 28-30, 1948, Hotel Antlers, Colorado Springs, Colo.

Fire Protection and Insurance Section.—W. E. Todd, 59 Van Buren St., Chicago 5, Ill.

Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Protective Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Safety Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.

Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.

Construction and Maintenance Section. — W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 15-17, 1949 Palmer House, Chicago, Ill.

Electrical Section—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, September 8, 1948, Htoel Sherman, Chicago, Ill.

Signal Section.—R. H. Balliet, 30 Vesey St., New York 7, N. Y. Annual meeting, September 14-16, 1948, Hotel Statler, Buffalo, N. Y.

Mechanical Division.—Arthur C. Browning, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, June 27-29, 1949, Congress Hotel, Chicago, Ill.

Electrical Section.—J. A. Andreucetti, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, September 9-10, 1948, Hotel Sherman, Chicago, Ill.

Purchases and Stores Division.—W. J. Farrell (Executive Vice-Chairman), Transportation Bldg., Washington 6, D. C.

Freight Claim Division.—C. C. Beauprie, (Executive Vice-Chairman), 59 E. Van Buren St., Chicago 5, Ill.

Motor Transport Division.—Transportation Bldg., Washington 6, D. C.

Car Service Division.—Arthur H. Gass, Chairman, Transportation Bldg., Washington 6, D. C.

Finance Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington 6, D. C.

Accounting Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.

Treasury Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C. Annual meeting, September 13-15, 1948, French Lick Springs Hotel, French Lick, Ind.

Traffic Department. — Walter J. Kelly, Traffic Officer. Transportation Bldg., Washington 6, D. C.

Association of Railroad Advertising Managers.—E. A. Abbott, 1103 Cleveland St., Evanston, Ill.

Association of Railway Claim Agents. —F. L. Johnson, Gulf, Mobile & Ohio, R. R., 340 W. Harrison St., Chicago 7, Ill.

Bridge and Building Supply Men's Association.—E. C. Gunther, Duff-Norton Mfg. Co., 122 S. Michigan Ave., Chicago 3, Ill. Exhibit in conjunction with meetings of the American Railway Bridge and Building Association, September 20-22, 1948, Hotel Stevens, Chicago, Ill.

Canadian Railway Club.—C. R. Crook, 4415 Marcil Ave., N. D. G., Montreal 28, Que. Regular meetings second Monday of each month, except June, July and August, Mount Royal Hotel, Montreal, Que.

Car Department Association of St. Louis.—J. J. Sheehan, 1101 Missouri Pacific Bldg., St. Louis 3, Mo. Regular meetings, third Tuesday of each month, except June, July and August, Hotel DeSoto, St. Louis, Mo.

Car Department Officers' Association. —F. H. Stremmel, 6536 Oxford Ave., Chicago 31, Ill. Annual meeting, September 20-23, 1948 Hotel Sherman, Chicago, Ill.

Car Foremen's Association of Chicago. —W. E. Angier, chief A. A. R. clerk, C. B. & Q. R. R., 547 W. Jackson Blvd., Chicago 6, Ill. Regular meetings, second Monday of each month except June, July and August, LaSalle Hotel, Chicago, Ill.

Central Railway Club of Buffalo.—R. E. Mann, 1840-42 Hotel Statler, McKinley Square, Buffalo 5, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

Chicago Luncheon Club of Military Railway Service Veterans.—Col. R. O. Jensen, Schiller Park, Ill. Luncheon, second Wednesday of each month, Chicago Traffic Club, Palmer House, Chicago, Ill.

Eastern Association of Car Service Officers.—H. J. Hawthorne, Union Railroad, East Pittsburgh, Pa.

Eastern Car Foremen's Association. — W. P. Dizard, 30 Church St., New York 7, N. Y. Regular meetings, second Friday of January, February (Annual Dinner), March, April, May October and November, 29 W. 39th St., New York, N. Y.

Locomotive Maintenance Officers' Association.—C. M. Lipscomb, 1721 Parker St., North Little Rock, Ark. Annual meeting September 20-23, 1948, Hotel Sherman, Chicago, Ill.

Maintenance of Way Club of Chicago. —C. R. Knowles, Room 2000, 105 W. Adams St., Chicago 3, Ill. Regular meetings, fourth Monday of each month, October through April, inclusive, except December, when the third Monday, Hardings at the Fair.

Master Boiler Makers' Association.—A. F. Stigmeier, 29 Parkwood St., Albany 3, N. Y. Annual meeting, September 20-23, 1948. Hotel Sherman, Chicago, Ill.

Metropolitan Maintenance of Way Club.—John Vreeland, Simmons-Boardman Publishing Corp., 30 Church St., New York 7, N. Y. Meets in October, December, February and April.

Military Railway Service Veterans.—S. Thomson, 1061 W. Sheridan Road, Chicago 40, Ill. Annual reunion, September 25, 1948, Jefferson Hotel, St. Louis, Mo.

National Association of Railroad and Utilities Commissioners.—Ben Smart, 7413 New Post Office Bldg., Washington 25, D. C. Annual meeting, November 15-18, 1948, Hotel Oglethorpe, Savannah, Ga.

National Association of Shippers' Advisory Boards.— F. J. Armstrong, United States Radiator Corporation, 1500 United Artists Bldg., Detroit, Mich. Annual meeting, October 5, 1948, Jefferson Hotel, St. Louis, Mo.

National Industrial Traffic League.—Edward F. Lacey, Suite 450, Munsey Bldg., Washington 4, D. C. Annual meeting, November 18-19, 1948, Hotel Pennsylvania, New York, N. Y.

National Railway Appliances Association.—R. B. Fisher, Suite 2414, 1 N. La Salle St., Chicago, Ill. Exhibit in connection with American Railway Engineering Association Convention, March 14-17, 1949, Coliseum, Chicago, Ill.

New England Railroad Club. — T. F. Dwyer, Jr. (Act. Sec'y.) 683 Atlantic Ave., Boston 11, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Vendome, Boston, Mass.

New York Railroad Club.—D. W. Pye, 30 Church St., New York 7, N. Y. Regular meetings, third Thursday of each month, except June, July, August, September and December, 29 W. 39th St., New York, N. Y.

Northwest Carmen's Association.—E. N. Myers. Minnesota Transfer Ry., 1434 Iowa Ave. W., St. Paul 4, Minn. Regular meetings, first Monday of each month, except June, July and August, Midway Club, 1931 University Ave., St. Paul, Minn.

Pacific Railway Club.—William S. Wollner, P. O. Box 458, San Rafael, Calif. Regular meetings, second Thursday of each alternate month at Palace Hotel, San Francisco, Calif.

Railway Business Association. — P. H. Middleton, First National Bank Bldg., Chicago 3, Ill. Annual meeting and dinner November 19, 1948, Waldorf-Astoria Hotel, New York, N. Y.

Railway Club of Pittsburgh.—J. D. Conway, 308 Keenan Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

Railway Electric Supply Manufacturer's Association.—J. McC. Price, Allen-Bradley Company, 624 W. Adams St., Chicago 6, Ill. Exhibit in conjunction with the meetings of the electrical Sections of the Mechanical Division and the Engineering Division, A.A.R., September 8-10, 1948, Hotel Sherman, Chicago, Ill.

Railway Fuel and Traveling Engineers' Association.—T. Duff Smith, Room 811, Utilities Bldg., 327 S. La Salle St., Chicago 4, Ill. Annual meeting, September 20-23, 1948, Hotel Sherman, Chicago, Ill.

Railway Supply Manufacturers' Association.—A. W. Brown, 60 E. 42nd St., New York 17, N. Y.

Railway Telegraph and Telephone Appliance Association.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with Communications Section, of A. A. R.

Railway Tie Association.—Roy M. Edmonds, 610 Shell Bldg., St. Louis 3, Mo. Annual meeting, August 30-September 1, 1948, Greenbriar Hotel, White Sulphur Springs, W. Va.

Roadmasters and Maintenance of Way Association.—Miss Elise La Chance Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 20-22, 1948, Hotel Stevens, Chicago, Ill.

Signal Appliance Association.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with A. A. R. Signal Section.

Southern and Southwestern Railway Club.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

Southern Association of Car Service Officers. P. J. Climer, (Acting Sec'y,) N. C. & St. L. Ry., Nashville, Tenn.

Toronto Railway Club.—D. L. Chambers, P. O. Box 8, Terminal 'A", Toronto 2, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

Track Supply Association. — Lewis Thomas, Q. and C. Company, 59 E. Van Buren St., Chicago 5, Ill. Exhibit in conjunction with meeting of the Roadmasters and Maintenance of Way Association, September 20-22, 1948, Hotel Stevens, Chicago, Ill.

United Associations of Railroad Veterans. — Roy E. Collins, 225 Bidwell Ave., Westerleigh, Staten Island 2, N. Y.

Western Railway Club.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago, Ill. Regular meetings, third Monday of each month, except January, June, July, August and September, Hotel Sherman, Chicago, Ill

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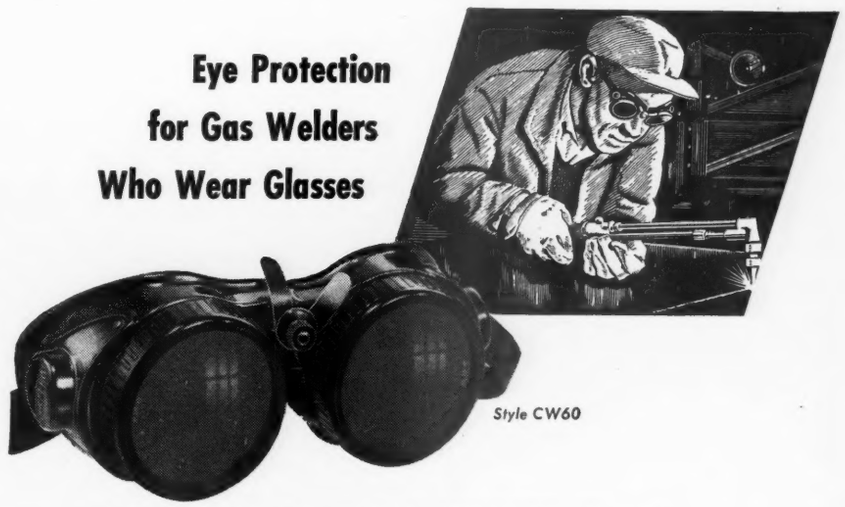

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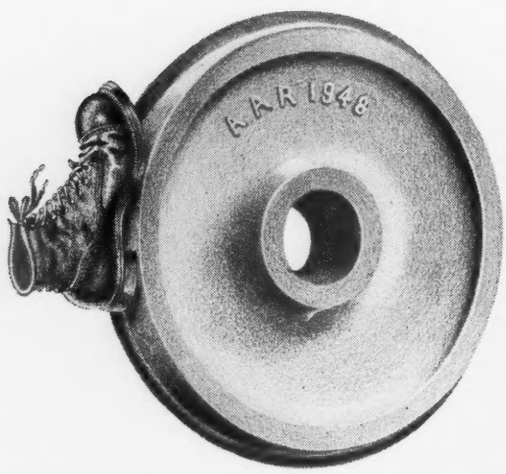
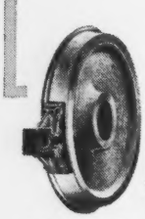


"Shoeing" the Iron Horse



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